

Safety Data Sheet

According to European Regulation (EC) 453/2010

Product name : PETROSOL 15A 15/20

Date of issue: 05/02/2015.

Cod. CEPSA : 325490000

Version: 10

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : PETROSOL 15A 15/20
Chemical family : Hydrocarbon.
EC number : 919-446-0(Provisional.)
REACH Registration number : 01-2119458049-33-0007
CAS number : 64742-82-1
Product code : 325490000
Product description : Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)
Product type : Liquid.
Other means of identification : White Spirit

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Use in Cleaning Agents - Professional
Use in Cleaning Agents - Industrial
Use in Lubricants.-Professional: low Environmental Release Category
Use in Lubricants.-Industrial: high Environmental Release Category
Uses in Coatings - Consumer
Use in Lubricants. - Industrial
Use in Lubricants. Consumer: Low release
Use in Lubricants. Consumer: high Environmental Release Category
Use in Metal working fluids/rolling oils - Industrial
Use in Metal working fluids/rolling oils - Professional
Use in Agrochemicals - Professional
Use in Agrochemicals - Consumer
Use as a fuel - Industrial
Use as a fuel - Professional
Use in Cleaning Agents - Consumer
Use as a fuel - Consumer
Use as functional fluids. - Industrial
Distribution of substance - Industrial
Manufacture of substance -Industrial
Formulation and (re)packing of substances and mixtures - Industrial
Manufacture of substance -Industrial
Uses in Coatings - Industrial
Use as functional fluids. - Professional
Use as functional fluids. - Consumer
Use in laboratories - Professional
Uses Road and construction applications - Professional
Use in laboratories - Industrial
Uses in Coatings-Professional

1.3 Details of the supplier of the safety data sheet

Supplier CEPSA QUÍMICA, S.A.
Torre CEPSA
Paseo de la Castellana, 259 A
28046 Madrid – España

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e-mail address of person responsible for this SDS : tutelaproducto@cepsa.com

National contact :

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number :

Supplier

Telephone number : +34 956 582341

Hours of operation : 24-hour telephone and/or website

Information limitations : +34 91 3376000 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226
STOT SE 3, H336 (Narcotic effects)
Asp. Tox. 1, H304
STOT RE 1, H372
Aquatic Chronic 2, H411
EUH066

Classification according to Directive 67/548/EEC [DSD]

R10
Xn; R48/20-65
R66, R67
N; R51/53

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapor.
H336 May cause drowsiness and dizziness.
H304 May be fatal if swallowed and enters airways.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

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| | |
|---|--|
| Prevention | : P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P273 - Avoid release to the environment. P280 - P301 + P310 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. |
| Response | : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| Storage | : Keep cool. |
| Disposal | : Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazardous ingredients | : Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) |
| Supplemental label elements | : Repeated exposure may cause skin dryness or cracking. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : Restricted to professional users. |
| <u>Special packaging requirements</u> | |
| Containers to be fitted with child-resistant fastenings | : Yes, applicable. |
| Tactile warning of danger | : Yes, applicable. |

2.3 Other hazards

| | |
|---|------------------|
| Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII | : No. |
| Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII | : No. |
| Other hazards which do not result in classification | : Not available. |

SECTION 3: Composition/information on ingredients

| | |
|--------------------------|--|
| Substance/mixture | : UVCB Content in Benzene < 0.1% w/w. |
|--------------------------|--|

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| Product/ingredient name | Identifiers | % | Classification | | Type |
|---|--|-----|---|--|------|
| | | | 67/548/EEC | Regulation (EC) No. 1272/2008 [CLP] | |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | REACH #: 01-2119458049-33-0007 EC: 265-185-4 CAS: 64742-82-1 | 100 | R10 Xn; R48/20-65 R66, R67 N; R51/53 See Section 16 for the full text of the R-phrases declared above. | Flam. Liq. 3, H226 STOT SE 3, H336 (Narcotic effects) Asp. Tox. 1, H304 Aquatic Chronic 2, H411 STOT RE 1: Specific target organ toxicity (repeated exposure), H372 See Section 16 for the full text of the H statements declared above. | [A] |

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[*] Substance

[A] Constituent

[B] Impurity

[C] Stabilizing additive

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

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Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.
Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
Ingestion : Adverse symptoms may include the following:
nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable : In case of fire, use water spray, foam, dry chemical or CO₂.
Not suitable : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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Hazardous thermal decomposition products : No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Fire-fighting measures : In use, may form flammable/explosive vapor-air mixture.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : This product is readily biodegradable.

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

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SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Seveso II Directive - Reporting thresholds (in tonnes)

Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|---|---------------------------------|-------------------------|
| P5c: Flammable liquids 2 and 3 not falling under P5a or P5b | 5000 | 50000 |
| E2: Hazardous to the aquatic environment - Chronic 2 | 200 | 500 |
| C6: Flammable (R10) | 5000 | 50000 |
| C9ii: Toxic for the environment | 200 | 500 |

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

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SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Remarks : CEPSA recommends a limit on occupational exposure based on the CEFIC-HSPA guideline figures (Reciprocal Calculation Procedure) of: 1200 mg/m³

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|---|---|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | INSHT (Spain, 3/2013). Absorbed through skin. TWA: 50 ppm 8 hours. STEL: 580 mg/m ³ 15 minutes. TWA: 290 mg/m ³ 8 hours. STEL: 100 ppm 15 minutes. |

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---|-------|-----------------------|-----------------------|------------|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | DNEL | Long term Dermal | 44 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 330 mg/m ³ | Workers | - |
| | DNELs | Short term Inhalation | 570 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 26 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Inhalation | 71 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Oral | 26 mg/kg bw/day | Consumers | Systemic |

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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| | |
|--|--|
| Eye/face protection | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Tightly-fitting goggles |
| <u>Skin protection</u> | |
| Hand protection | : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): Impervious gloves. nitrile rubber PVC Viton® |
| Body protection | : Use suitable protective equipment. |
| Other skin protection | : Suitable protective footwear. |
| Respiratory protection | : If operating conditions cause high vapor concentrations or the TLV is exceeded, use supplied-air respirator. |
| Environmental exposure controls | : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|---|--|
| Physical state | : Liquid. [Colorless.] |
| Color | : Not available. |
| Odor | : Hydrocarbon. |
| Odor threshold | : Not available. |
| pH | : Not applicable. |
| Melting point/freezing point | : <-20°C |
| Initial boiling point and boiling range | : 135 to 200°C |
| Flash point | : Closed cup: 38,5°C Open cup: 41°C |
| Evaporation rate | : Not available. |
| Flammability (solid, gas) | : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. |
| Burning time | : Not applicable. |
| Burning rate | : Not applicable. |
| Upper/lower flammability or explosive limits | : Lower: 0,6% Upper: 7,2% |
| Vapor pressure | : 0,23 kPa [20°C] |
| Vapor density | : Not available. |
| Relative density | : 720 |
| Density | : 0,72 to 0,82 g/cm³ [15°C] |
| Solubility(ies) | : Insoluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/ water | : Not available. |
| Auto-ignition temperature | : >200°C |
| Decomposition temperature | : Not available. |
| Viscosity | : Kinematic: 0,012 cm²/s Kinematic (40°C): 0,00918 cm²/s |

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Explosive properties : Not available.

Oxidizing properties : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|-----------------------|---------|--------------|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | LC50 Inhalation Vapor | Rat | >13,1 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >3400 mg/kg | - |
| | LD50 Oral | Rat | >15000 mg/kg | - |

Conclusion/Summary : Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|------------------------------------|---------|-------|----------|-------------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Skin - Edema | Rabbit | 1 | - | - |
| | Skin - Erythema/Eschar | Rabbit | 1,22 | - | - |
| | Eyes - Redness of the conjunctivae | Rabbit | 0,3 | - | - |
| | Eyes - Edema of the conjunctivae | Rabbit | 0 | - | - |
| | Eyes - Iris lesion | Rabbit | 0 | - | - |

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Based on available data, the classification criteria are not met.

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Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|------------|-----------------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | skin | Guinea pig | Not sensitizing |
| | skin | Human | Not sensitizing |

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|---|------|---|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | - | Experiment: In vitro Subject: Bacteria | Negative |
| | - | Experiment: In vitro Subject: Mammalian-Animal | Negative |

Conclusion/Summary : Not mutagenic in a standard battery of genetic toxicological tests.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Development toxin | Species | Dose | Exposure |
|---|-------------------|-----------|-------------------|---------|------------|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Negative | Negative | Negative | Rat | Inhalation | - |

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|-----------------|---------|------|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Negative - Oral | Rat | - | - |

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|------------|-------------------|------------------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Category 3 | Inhalation | Narcotic effects |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|---------------|
| | Category 1 | Inhalation | - |

Aspiration hazard

| Product/ingredient name | Result |
|---|--------------------------------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | ASPIRATION HAZARD - Category 1 |

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Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|------------------------------------|---------|-----------------------|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Sub-chronic NOAEL Oral | Rat | >1056 mg/kg | 90 days |
| | Sub-chronic NOAEL Dermal | Rat | >490 mg/kg | 90 days |
| | Sub-chronic NOAEL Inhalation Vapor | Rat | 690 mg/m ³ | 90 days |

Conclusion/Summary : Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

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Other information : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

| Product/ingredient name | Result | Species | Exposure |
|---|---------------------|----------------------------|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | EC50 4,6 to 10 mg/l | Algae | 72 hours |
| | EC50 10 to 20 mg/l | Daphnia - Daphnia magna | 48 hours |
| | EC50 10 to 30 mg/l | Fish - Oncorhynchus mykiss | 96 hours |
| | NOEC 0,28 mg/l | Daphnia - Daphnia magna | 21 days |
| | NOEC 0,13 mg/l | Fish - Oncorhynchus mykiss | 28 days |

Conclusion/Summary : Not available.**12.2 Persistence and degradability**

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|--|----------------------------|------|----------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | 301F Ready Biodegradability - Manometric Respirometry Test | 74,7 % - Readily - 28 days | - | - |

Conclusion/Summary : May decompose on exposure to moist air and water.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| Not available. | - | - | Biodegradable |

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil**Soil/water partition coefficient (K_{oc})** : Not available.**Mobility** : Not available.**12.5 Results of PBT and vPvB assessment****PBT** : No.**vPvB** : No.**12.6 Other adverse effects** : No known significant effects or critical hazards.

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SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.





Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|--|--|--|--|--|
| 14.1 UN number | UN1300 | UN1300 | UN1300 | UN1300 |
| 14.2 UN proper shipping name | TURPENTINE SUBSTITUTE | TURPENTINE SUBSTITUTE | TURPENTINE SUBSTITUTE | TURPENTINE SUBSTITUTE |
| 14.3 Transport hazard class(es) | 3  | 3  | 3  | 3  |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. |
| 14.6 Special precautions for user | Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know | Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know | Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know | Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know |

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| | what to do in the event of an accident or spillage. | what to do in the event of an accident or spillage. | what to do in the event of an accident or spillage. | what to do in the event of an accident or spillage. |
|-------------------------------|--|---|--|--|
| Additional information | <p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><u>Hazard identification number</u> 30</p> <p><u>Limited quantity</u> 5 L</p> <p><u>Special provisions</u> 640 (E)</p> | <p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> | <p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><u>Emergency schedules (EmS)</u> F-E, S-D</p> <p><u>Special provisions</u> 223</p> | <p>The environmentally hazardous substance mark may appear if required by other transportation regulations.</p> <p><u>Passenger and Cargo Aircraft</u> Quantity limitation: 60 L Packaging instructions: 309</p> <p><u>Cargo Aircraft Only</u> Quantity limitation: 220 L Packaging instructions: 310</p> <p><u>Limited Quantities - Passenger Aircraft</u> Quantity limitation: 10 L Packaging instructions: Y309</p> <p><u>Special provisions</u> A3, A224</p> |

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Proper shipping name : White spirit, low (15–20%) aromatic
Ship type : 2
Pollution category : Y

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

International Convention for the Prevention of Pollution From Ships, MARPOL 73 in its amended form.

International Maritime Dangerous Goods (Code IMDG) according to chapter VII of the International Convention for the Safety of Life at Sea, 1974.

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Other EU regulations

Europe inventory : This material is listed or exempted.

Seveso II Directive

This product is controlled under the Seveso II Directive.

Danger criteria

Category

P5c: Flammable liquids 2 and 3 not falling under P5a or P5b
E2: Hazardous to the aquatic environment - Chronic 2
C6: Flammable (R10)
C9ii: Toxic for the environment

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

| | |
|-------------------|---|
| Australia | : |
| Canada | : |
| China | : |
| Japan | : |
| Malaysia | : |
| New Zealand | : |
| Philippines | : |
| Republic of Korea | : |
| Taiwan | : |
| United States | : |

15.2 Chemical Safety Assessment : Complete.

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SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|---|---|
| Flam. Liq. 3, H226 STOT SE 3, H336 (Narcotic effects) Asp. Tox. 1, H304 STOT RE 1, H372 Aquatic Chronic 2, H411 EUH066 | Expert judgment Expert judgment Expert judgment Regulatory data Expert judgment |

Full text of abbreviated H statements : H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H336i May cause drowsiness and dizziness.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] : Aquatic Chronic 2, H411 AQUATIC TOXICITY (CHRONIC) - Category 2
Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1
Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3
STOT SE 3, H336i SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): INHALATION [Narcotic effects] - Category 3

Full text of abbreviated R phrases : R10- Flammable.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65- Harmful: may cause lung damage if swallowed.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapors may cause drowsiness and dizziness.

Full text of classifications [DSD/DPD] : Xn - Harmful
N - Dangerous for the environment

Date of printing : 05/02/2015.

Date of issue/ Date of revision : 05/02/2015.

Date of previous issue : 05/02/2015.

Version : 10

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Remarks

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in coatings - Consumer

List of use descriptors : **Identified use name:** Uses in Coatings - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.3c.v1
Market sector by type of chemical product: PC01, PC04, PC08, PC09a, PC09b, PC09c, PC15, PC18, PC23, PC24, PC31, PC34

Environmental contributing scenarios : **Uses in Coatings**

Health Contributing Scenarios : **Uses in Coatings**

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Uses in Coatings

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Concentration of substance in mixture or article :

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 4400
Fraction of Regional tonnage used locally: 0.000005
Annual site tonnage (tonnes/year): 2.2
Maximum daily site tonnage (kg/day): 6

Frequency and duration of use : Emission Days (days/year): 365 - Continuous release.

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.985
Release fraction to wastewater from wide dispersive use: 0.01
Release fraction to air from wide dispersive use (regional only): 0.005

Conditions and measures related to municipal sewage treatment plant : Risk from environmental exposure is driven by soil.
Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 1900
Assumed on-site sewage treatment plant flow (m^3/d): 2000

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling consumer exposure for 0: Uses in Coatings

Concentration of substance in mixture or article : Unless otherwise stated. Covers concentrations up to 100%

Physical state : Liquid, vapour pressure < 0.5 kPa at STP. - Vapor pressure 200 Pa

Amounts used : Unless otherwise stated. Covers use up to 13800 g.
Covers skin contact area up to 857.5 cm²

Frequency and duration of use : Unless otherwise stated. Covers use up to 1 application per day
Use duration: 6h

Other given operational conditions affecting consumers exposure : Unless otherwise stated. Assumes activities are at ambient temperature (unless stated differently). - Covers use in room size of 20m³ - Provide adequate ventilation.

Product Category(ies) - Operational conditions and risk management measures

Adhesives, sealants Glues, hobby use

Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 365 days/year - Covers exposure up to 1 application per day - Covers skin contact area up to 35.73 cm² - Covers exposure up to 9 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 4 h/per task: - Covers use under typical household ventilation.

Adhesives, sealants Glues DIY-use (carpet glue, tile glue, wood parquet glue)
Unless otherwise stated. Covers concentrations up to 30% - Covers use up to 1 days/year - Covers use up to 1 application per day - Covers skin contact area up to 110 cm² - For each use event, covers use amounts up to 6390 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 6 h - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants Glue from spray

Unless otherwise stated, Covers concentrations up to 30 % - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 85.05 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 4 h - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants Sealants

Unless otherwise stated. Covers concentrations up to 30 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 75 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 1 h - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Anti-Freeze and de-icing products - Washing car window

Unless otherwise stated. Covers concentrations up to 1 % - Covers use up to 365 days/year - Covers use up to 1 application per day - For each use event, covers use amounts up to 0.5 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.02 h - No specific risk management measure identified beyond those operational conditions stated.

Anti-Freeze and de-icing products Pouring into radiator

Covers concentrations up to 10 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428 cm² - For each use event, covers use amounts up to 2000 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.17 h - No specific risk management measure identified beyond those operational conditions stated.

Anti-Freeze and de-icing products - Lock de-icer

Unless otherwise stated. Covers concentrations up to 50 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 214 cm² - For each use event, covers use amounts up to 4 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.25 h - No specific risk management measure identified beyond those operational conditions stated.

Biocidal products (e.g. Disinfectants, pest control) - Laundry and dish-washing products

Covers concentrations up to Unless otherwise stated. 5 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 15 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.5 h - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Biocidal products (e.g. Disinfectants, pest control) - Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)

Unless otherwise stated, Covers concentrations up to 5 % - Covers use up to 128 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 27 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.33 h - No specific risk management measure identified beyond those operational conditions stated.

Biocidal products (e.g. Disinfectants, pest control) - Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Unless otherwise stated, Covers concentrations up to 15 % - Covers use up to 128 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.00 cm² - For each use event, covers use amounts up to 35 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.17 h - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Water-borne latex wall paint

Covers concentrations up to Unless otherwise stated. 1.5 % - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 2260 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 2.20 h - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Solvent-rich, high-solid, water-borne paint

Unless otherwise stated. Covers concentrations up to 27.5 % - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - Covers use up to 744 g. - Covers use in room size of 20m³ - Covers use under typical household ventilation. - For each use event, covers use amounts up to 2.20 h - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Aerosol spray can

Unless otherwise stated. Covers exposure up to 50 % - Covers use up to 2 days/year - Covers use up to 1 application per day - Covers use up to 215 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.33 h - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Removers (paint-, glue-, wall paper-, sealant-remover)

Unless otherwise stated. Covers concentrations up to 50 % - Covers use up to 3 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 491 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.00 h. - No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay - Fillers and putty

Unless otherwise stated, Covers concentrations up to 2 % - Covers use up to 12

days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 85 g. - Covers use in room size of 20m³ - Covers use under typical household ventilation. - For each use event, covers use amounts up to 4.00 h - No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay - Plasters and floor equalisers
Unless otherwise stated, Covers concentrations up to 2% Covers use up to 12 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 13800 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.00 h - No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay - Modelling clay
Unless otherwise stated, Covers concentrations up to 1 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 254.4 cm² - For each use event, assumes swallowed amount of 1g. - No specific risk management measure identified beyond those operational conditions stated.

Finger paints
Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 254.40 cm² - For each use event, assumes swallowed amount of 1.35 g. - Avoid using at a product concentration greater than 5 %

Non-metal-surface treatment products - Water-borne latex wall paint
Unless otherwise stated, Covers concentrations up to 1.5 % - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 2760 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.20 h - No specific risk management measure identified beyond those operational conditions stated.

Non-metal-surface treatment products - Solvent-rich, high-solid, water-borne paint
Unless otherwise stated, Covers concentrations up to 27.5 % - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 744 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.20 h - No specific risk management measure identified beyond those operational conditions stated.

Non-metal-surface treatment products - Aerosol spray can
Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 2 days/year - Covers use up to 1 application per day - For each use event, covers use amounts up to 215 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.33 h - No specific risk management measure identified beyond those operational conditions stated.

Non-metal-surface treatment products - Removers (paint-, glue-, wall paper-, sealant-remover)
Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 3 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 491g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.00 h - No specific risk management measure identified beyond those operational conditions stated.

Ink and toners
Unless otherwise stated, Covers concentrations up to 10 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 71.40 cm² - For each use event, covers use amounts up to 40 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.20 h - No specific risk management measure identified beyond those operational conditions stated.

Leather tanning, dye, finishing, impregnation and care products - Polishes, wax/cream (floor, furniture, shoes)
Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 29

days/year - Covers use up to 1 application per day - Covers skin contact area up to 430.00 cm² - For each use event, covers use amounts up to 56 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 1.23 h - No specific risk management measure identified beyond those operational conditions stated.

Leather tanning, dye, finishing, impregnation and care products - Polishes, spray (furniture, shoes)

Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 8 days/year - Covers use up to 1 application per day - Covers skin contact area up to 430.00 cm² - For each use event, covers use amounts up to 56 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.33 h - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Liquids

Unless otherwise stated, Covers concentrations up to 100 % - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to 468.00 cm² - For each use event, covers use amounts up to 2200 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.17 h/per task: - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Pastes

Unless otherwise stated, Covers concentrations up to 20 % - Covers use up to 10 days/year - Covers use up to 1 application per day - Covers skin contact area up to 468.00 cm² - For each use event, covers use amounts up to 34 g. - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products Sprays

Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 73 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 0.17 h - No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends - Polishes, wax/cream (floor, furniture, shoes)

Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 29 days/year - Covers use up to 1 application per day - Covers skin contact area up to 430 cm² - For each use event, covers use amounts up to 142 g. - Covers use in room size of 20m³ - Covers use under typical household ventilation. - For each use event, covers use amounts up to 1.23 h - No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends - Polishes, spray (furniture, shoes)

Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 8 days/year - Covers use up to 1 application per day - Covers skin contact area up to 430 cm² - For each use event, covers use amounts up to 35 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.33 h - No specific risk management measure identified beyond those operational conditions stated.

Textile dyes, finishing and impregnating products; including bleaches and other processing aids

Unless otherwise stated, Covers concentrations up to 10 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 115 g. - Covers use in room size of 20m³ - Covers use under typical household ventilation. - For each use event, covers use amounts up to 1 h - No specific risk management measure identified beyond those operational conditions stated.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not available.

Exposure estimation and reference to its source - Environment: 1: Uses in Coatings

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Consumers: 0: Uses in Coatings

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. - Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. - Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Lubricants - Consumer: Low Environmental Release

List of use descriptors : **Identified use name:** Use in Lubricants. Consumer: Low release
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.6d.v1
Market sector by type of chemical product: PC01, PC24, PC31

Environmental contributing scenarios : **Use in Lubricants.**

Health Contributing Scenarios : **Use in Lubricants.**

Processes and activities covered by the exposure scenario : Covers the consumer use of formulated lubricants in closed and open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Lubricants.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 25
Fraction of Regional tonnage used locally: 2.2
Annual site tonnage (tonnes/year): 0.013
Maximum daily site tonnage (kg/day): 0.034

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.5
Release fraction to wastewater from wide dispersive use: 0.05
Release fraction to soil from wide dispersive use (regional only): 0.05

Conditions and measures related to municipal sewage treatment plant : Risk from environmental exposure is driven by freshwater.
Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 38
Assumed on-site sewage treatment plant flow (m^3/d): 2000

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling consumer exposure for 0: Use in Lubricants.

| | |
|--|---|
| Concentration of substance in mixture or article | : Unless otherwise stated. Covers concentrations up to 100% |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. - Vapor pressure: 200 Pa |
| Amounts used | : Unless otherwise stated. Covers use up to 6390 g Covers skin contact area up to 468 cm ² |
| Frequency and duration of use | : Unless otherwise stated. Covers use up to 1 application per day Covers exposure up to 6 hr per task: |
| Other given operational conditions affecting consumers exposure | : Unless otherwise stated. Assumes activities are at ambient temperature (unless stated differently). Covers use in room size of 20m ³ ; Provide adequate ventilation. |

Product Category(ies) - Operational conditions and risk management measures**Lubricants, greases, release products - Sprays**

Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 73g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 0.17 hr/ Single event. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants - Glues, hobby use

Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 9g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 4 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants - Glue from spray

Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 85.05g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 4.00 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants

Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 75g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers use up to 1.00 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends - Polishes, wax/cream (floor, furniture, shoes)

Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 29 days/year - Covers use up to 1 application per day - Covers skin contact area up to 430.00 cm² - For each use event, covers use amounts up to 142g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 1.23 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends - Polishes, spray (furniture, shoes)

Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 8 days/year - Covers use up to 1 application per day - Covers skin contact area up to 430.00 cm² - For each use event, covers use amounts up to 35g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 0.33 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Liquids

Unless otherwise stated, Covers concentrations up to 100% - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to

468.00 cm² - For each use event, covers use amounts up to 2200g - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34m³ - Covers exposure up to 0.17 hr/ Single event. - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Pastes

Unless otherwise stated, Covers concentrations up to 20% - Covers use up to 10 days/year - Covers use up to 1 application per day - Covers skin contact area up to 468cm² - For each use event, covers use amounts up to 34g - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants, Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 1 application per day - Covers use up to 1 days/year - Covers skin contact area up to 110cm² - For each use event, covers use amounts up to 6390g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 6hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Lubricants.

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Consumers: 0: Use in Lubricants.

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. - Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Lubricants - Consumer: High Environmental Release

List of use descriptors : **Identified use name:** Use in Lubricants. Consumer: high Environmental Release Category
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOV SpERC 8.6e.v1
Market sector by type of chemical product: PC01, PC21, PC31

Environmental contributing scenarios : **Use in Lubricants.**

Health Contributing Scenarios : **Use in Lubricants.**

Processes and activities covered by the exposure scenario : Covers the consumer use of formulated lubricants in closed and open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Lubricants.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 250
Regional use tonnage (tonnes/year): 25
Fraction of Regional tonnage used locally: 0.00005
Annual site tonnage (tonnes/year): 0.013
Maximum daily site tonnage (kg/day): 0.034

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.15
Release fraction to wastewater from wide dispersive use: 0.05
Release fraction to soil from wide dispersive use (regional only): 0.05

Conditions and measures related to municipal sewage treatment plant : Risk from environmental exposure is driven by freshwater.
Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 38
Assumed on-site sewage treatment plant flow (m^3/d): 2000

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling consumer exposure for 0: Use in Lubricants.

| | |
|--|---|
| Concentration of substance in mixture or article | : Unless otherwise stated. Covers concentrations up to 100% |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. - Vapor pressure: 200 Pa |
| Amounts used | : Unless otherwise stated. Covers use up to 6390 g Covers skin contact area up to 468 cm ² |
| Frequency and duration of use | : Unless otherwise stated. Covers use up to 1 application per day Covers exposure up to 6 hr per task: |
| Other given operational conditions affecting consumers exposure | : Unless otherwise stated. Assumes activities are at ambient temperature (unless stated differently). Covers use in room size of 20m ³ ; Provide adequate ventilation. |

Product Category(ies) - Operational conditions and risk management measures

Lubricants, greases, release products - Sprays
Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 73g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 0.17 hr/ Single event. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants - Glues, hobby use
Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 9g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 4 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants - Glue from spray
Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 85.05g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 4.00 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants
Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 75g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers use up to 1.00 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends - Polishes, wax/cream (floor, furniture, shoes)
Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 29 days/year - Covers use up to 1 application per day - Covers skin contact area up to 430.00 cm² - For each use event, covers use amounts up to 142g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 1.23 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends - Polishes, spray (furniture, shoes)
Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 8 days/year - Covers use up to 1 application per day - Covers skin contact area up to 430.00 cm² - For each use event, covers use amounts up to 35g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 0.33 hr/Single event. - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Liquids
Unless otherwise stated, Covers concentrations up to 100% - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to

468.00 cm² - For each use event, covers use amounts up to 2200g - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34m³ - Covers exposure up to 0.17 hr/ Single event. - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Pastes

Unless otherwise stated, Covers concentrations up to 20% - Covers use up to 10 days/year - Covers use up to 1 application per day - Covers skin contact area up to 468cm² - For each use event, covers use amounts up to 34g - No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants, Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Unless otherwise stated, Covers concentrations up to 30% - Covers use up to 1 application per day - Covers use up to 1 days/year - Covers skin contact area up to 110cm² - For each use event, covers use amounts up to 6390g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 6hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Lubricants.

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Consumers: 0: Use in Lubricants.

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. - Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Health : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. - Further details on scaling and control technologies are provided in SpERC factsheet.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Agrochemical - Consumer

List of use descriptors : **Identified use name:** Use in Agrochemicals - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.11b.v1
Market sector by type of chemical product: PC12, PC27

Environmental contributing scenarios : **Use in Agrochemicals**

Health Contributing Scenarios : **Use in Agrochemicals**

Processes and activities covered by the exposure scenario : Covers the consumer use in agrochemicals in liquid and solid forms.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Agrochemicals

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Concentration of substance in mixture or article :

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 1.8
Fraction of Regional tonnage used locally: 2.2
Annual site tonnage (tonnes/year): 0.036
Maximum daily site tonnage (kg/day): 0.0099

Frequency and duration of use : Emission Days (days/year): 365 - Continuous release.

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.9
Release fraction to wastewater from wide dispersive use: 0.01
Release fraction to soil from wide dispersive use (regional only): 0.09

Conditions and measures related to municipal sewage treatment plant : Risk from environmental exposure is driven by freshwater.
Estimated substance removal from wastewater via on-site sewage treatment (%): 93.6
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 12
Assumed on-site sewage treatment plant flow (m^3/d): 2000

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling consumer exposure for 0: Use in Agrochemicals

Concentration of substance in mixture or article : Unless otherwise stated. Covers concentrations up to 50%

Physical state : Liquid, vapour pressure < 0.5 kPa at STP. - Vapor pressure 200 Pa

Amounts used : Covers skin contact area up to 857.5 cm²

Frequency and duration of use : Unless otherwise stated. Covers use up to 1 application per day

Other given operational conditions affecting consumers exposure : Unless otherwise stated. Assumes activities are at ambient temperature (unless stated differently). - Covers use in room size of 20m³ - Provide adequate ventilation.

Product Category(ies) - Operational conditions and risk management measures

Fertilizers. Lawn and garden preparations

Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 365 days/year - Covers exposure up to 1 application per day - Covers skin contact area up to 857.5 cm² - For each use event, assumes swallowed amount of 0.3 g. - No specific risk management measure identified beyond those operational conditions stated.

Plant Protection Product

Unless otherwise stated. Covers concentrations up to 50% - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.5 cm² - For each use event, assumes swallowed amount of 0.3 g. - No specific risk management measure identified beyond those operational conditions stated.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not available.

Exposure estimation and reference to its source - Environment: 1: Use in Agrochemicals

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Consumers: 0: Use in Agrochemicals

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. - Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. - Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Cleaning Agent - Consumer

List of use descriptors : **Identified use name:** Use in Cleaning Agents - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.4c.v1
Market sector by type of chemical product: PC03, PC04, PC08, PC09a, PC09b, PC09c, PC24, PC35, PC38

Environmental contributing scenarios : **Use in Cleaning Agents**

Health Contributing Scenarios : **Use in Cleaning Agents**

Processes and activities covered by the exposure scenario : Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air-care products.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Cleaning Agents

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Concentration of substance in mixture or article :

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 50
Fraction of Regional tonnage used locally: 2.2
Annual site tonnage (tonnes/year): 0.25
Maximum daily site tonnage (kg/day): 0.068

Frequency and duration of use : Emission Days (days/year): 365 - Continuous release.

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.95
Release fraction to wastewater from wide dispersive use: 0.025
Release fraction to air from wide dispersive use (regional only): 0.025

Conditions and measures related to municipal sewage treatment plant : Risk from environmental exposure is driven by soil.
Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 77
Assumed on-site sewage treatment plant flow (m^3/d): 2000

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling consumer exposure for 0: Use in Cleaning Agents

Concentration of substance in mixture or article : Unless otherwise stated. Covers concentrations up to 100%

Physical state : Liquid, vapour pressure < 0.5 kPa at STP. - Vapor pressure 200 Pa

Amounts used : Unless otherwise stated. Covers use up to 13800 g.
Covers skin contact area up to 857.5 cm²

Frequency and duration of use : Unless otherwise stated. Covers use up to 4 application per day - Covers exposure up to 8h/per task:

Other given operational conditions affecting consumers exposure : Unless otherwise stated. Assumes activities are at ambient temperature (unless stated differently). - Covers use in room size of 20m³ - Use with adequate ventilation.

Product Category(ies) - Operational conditions and risk management measures

Air care, instant action (aerosol sprays)
Unless otherwise stated, Covers concentrations up to 50% - Covers use up to 365 days/year - Covers exposure up to 4 application per day - For each use event, covers use amounts up to 0.1 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.25 hr/per task: - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Air care, instant action (aerosol sprays) - Pesticide. - excipient only
Unless otherwise stated. Covers concentrations up to 50% - Covers use up to 365 days/year - Covers use up to 4 application per day - For each use event, covers use amounts up to 5 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.25 h/per task: - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Air care, continuous action (solid and liquid)
Unless otherwise stated, Covers concentrations up to 10 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.7 cm² - For each use event, covers use amounts up to 0.48 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 8hr/per task: - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Anti-freezing agents - Washing car window
Unless otherwise stated. Covers concentrations up to 1 % - Covers use up to 365 days/year - Covers use up to 1 application per day - For each use event, covers use amounts up to 0.5 g. - Covers use in room size of 34 m² - For each use event, covers use amounts up to 0.2 hr/per task: - Covers use in a one car garage (34 m³) under typical ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Welding and soldering agents, Fluxing agents
Unless otherwise stated. Covers concentrations up to 20 % - Covers use up to 365 days/year - Covers use up to 1 application per day - For each use event, covers use amounts up to 12 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 1 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Anti-Freeze and de-icing products Pouring into radiator
Covers concentrations up to 10 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428 cm² - For each use event, covers use amounts up to 2000 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in a one car garage (34 m³) under typical ventilation. - For each use event, covers use amounts up to 0.17 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Anti-Freeze and de-icing products - Lock de-icer

Unless otherwise stated. Covers concentrations up to 50 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 214 cm² - For each use event, covers use amounts up to 4 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.25 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Biocidal products (e.g. Disinfectants, pest control) - Laundry and dish-washing products

Covers concentrations up to Unless otherwise stated. 5 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 15 g. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.5 hr/per task: - Covers use under typical household ventilation. - No specific risk management measure identified beyond those operational conditions stated.

Biocidal products (e.g. Disinfectants, pest control) - Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)

Unless otherwise stated, Covers concentrations up to 5 % - Covers use up to 128 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 27 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.33 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Biocidal products (e.g. Disinfectants, pest control) - Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Unless otherwise stated, Covers concentrations up to 15 % - Covers use up to 128 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.00 cm² - For each use event, covers use amounts up to 35 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.17 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Water-borne latex wall paint

Covers concentrations up to Unless otherwise stated. 1.5 % - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 2760 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 2.20 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Solvent-rich, high-solid, water-borne paint

Unless otherwise stated. Covers concentrations up to 27.5 % - Covers use up to 6 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - Covers use up to 744 g. - Covers use in room size of 20m³ - Covers use under typical household ventilation. - For each use event, covers use amounts up to 2.2 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Aerosol spray can

Unless otherwise stated. Covers exposure up to 50 % - Covers use up to 2 days/year - Covers use up to 1 application per day - Covers use up to 215 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.33 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, thinners, paint removers - Removers (paint-, glue-, wall paper-, sealant-remover)

Unless otherwise stated. Covers concentrations up to 50 % - Covers use up to 3 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 491 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.00 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay - Fillers and putty
Unless otherwise stated, Covers concentrations up to 2 % - Covers use up to 12 days/year - Covers use up to 1 application per day - Covers skin contact area up to 35.73 cm² - For each use event, covers use amounts up to 85 g. - Covers use in room size of 20m³ - Covers use under typical household ventilation. - For each use event, covers use amounts up to 4.00 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay - Plasters and floor equalisers
Unless otherwise stated, Covers concentrations up to 2% Covers use up to 12 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.50 cm² - For each use event, covers use amounts up to 13800 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 2.00 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay - Modelling clay
Unless otherwise stated, Covers concentrations up to 1 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 254.4 cm² - For each use event, assumes swallowed amount of 1g. - No specific risk management measure identified beyond those operational conditions stated.

Finger paints
Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 254.40 cm² - For each use event, assumes swallowed amount of 1.35 g. - Avoid using at a product concentration greater than 5 %

Cleaning and Washing operations. - Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)
Unless otherwise stated, Covers concentrations up to 15 % - Covers use up to 128 days/year - Covers use up to 1 application per day - Covers skin contact area up to 428 cm² - For each use event, covers use amounts up to 35 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.17hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Cleaning and Washing operations. - Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)
Unless otherwise stated, Covers concentrations up to 5 % - Covers use up to 128 days/year - Covers use up to 1 application per day - Covers skin contact area up to 457.5 cm² - For each use event, covers use amounts up to 27 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.33 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Cleaning and Washing operations. - Laundry and dish-washing products
Unless otherwise stated, Covers concentrations up to 5 % Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 857.5 cm² - For each use event, covers use amounts up to 15 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.5 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Liquids
Unless otherwise stated, Covers concentrations up to 100 % - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to 468.00 cm² - For each use event, covers use amounts up to 2200 g. - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - For each use event, covers use amounts up to 0.17 h/per task: - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products - Pastes
Unless otherwise stated, Covers concentrations up to 20 % - Covers use up to 10 days/year - Covers use up to 1 application per day - Covers skin contact area up to 468.00 cm² - For each use event, covers use amounts up to 34 g. - No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products Sprays
Unless otherwise stated, Covers concentrations up to 50 % - Covers use up to 6

days/year - Covers use up to 1 application per day - Covers skin contact area up to 428.75 cm² - For each use event, covers use amounts up to 73 g. - Covers use under typical household ventilation. - Covers use in room size of 20m³ - For each use event, covers use amounts up to 0.17 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not available.

Exposure estimation and reference to its source - Environment: 1: Use in Cleaning Agents

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Consumers: 0: Use in Cleaning Agents

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. - Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. - Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use as a Fuel - Consumer

List of use descriptors : **Identified use name:** Use as a fuel - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.12c.v1
Market sector by type of chemical product: PC13

Environmental contributing scenarios : Use as a fuel

Health Contributing Scenarios : Use as a fuel

Processes and activities covered by the exposure scenario : Covers consumer uses in liquid fuels.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use as a fuel

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Concentration of substance in mixture or article :

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 29
Fraction of Regional tonnage used locally: 2.2
Annual site tonnage (tonnes/year): 0.015
Maximum daily site tonnage (kg/day): 0.04

Frequency and duration of use : Emission Days (days/year): 365 - Continuous release.

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.0001
Release fraction to wastewater from wide dispersive use: 0.00001
Release fraction to soil from wide dispersive use (regional only): 0.00001

Conditions and measures related to municipal sewage treatment plant : Risk from environmental exposure is driven by freshwater.
Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 49
Assumed on-site sewage treatment plant flow (m^3/d): 2000

Conditions and measures related to external treatment of waste for disposal : Combustion emissions limited by required exhaust emission controls. - Combustion emissions considered in regional exposure assessment. - External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : This substance is consumed during use and no waste from the substance is generated.

Contributing scenario controlling consumer exposure for 0: Use as a fuel

Concentration of substance in mixture or article : Unless otherwise stated. Covers concentrations up to 100%

Physical state : Liquid, vapour pressure < 0.5 kPa at STP. - Vapor pressure 200 Pa

Amounts used : Covers skin contact area up to 420 cm² - Unless otherwise stated, Covers concentrations up to 37500g

Frequency and duration of use : Unless otherwise stated. Covers use up to 1 application per day - Covers exposure up to 2 hr/per task:

Other given operational conditions affecting consumers exposure : Unless otherwise stated. Assumes activities are at ambient temperature (unless stated differently). - Covers use in room size of 20m³ - Provide adequate ventilation.

Product Category(ies) - Operational conditions and risk management measures

Fuel. Liquid: Automotive Refuelling

Unless otherwise stated, Covers concentrations up to 100% - Covers exposure up to 1 application per day - Covers use up to 52 days/year - Covers skin contact area up to 210 cm² - For each use event, covers use amounts up to 37500 g. - Covers outdoor use. - Covers use in room size of 100 m³ - Covers exposure up to 0.03 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fuel. Liquid Scooter Refuelling

Unless otherwise stated. Covers concentrations up to 100% - Covers use up to 52 days/year - Covers use up to 1 application per day - Covers skin contact area up to 210 cm² - For each use event, covers use amounts up to 3750 g. - Covers outdoor use. - Covers use in room size of 100 m³ - Covers exposure up to 0.03 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fuel. Liquid Garden Equipment - Use

Unless otherwise stated. Covers concentrations up to 100% - Covers use up to 26 days/year - Covers use up to 1 application per day - For each use event, covers use amounts up to 750g - Covers outdoor use. - Covers use in room size of 100m³ - Covers exposure up to 2 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fuel. Liquid: Garden Equipment - Refuelling

Unless otherwise stated. Covers concentrations up to 100% - Covers use up to 26 days/year - Covers use up to 1 application per day - Covers skin contact area up to 420 cm² - For each use event, covers use amounts up to 750g - Covers use in a one car garage (34 m³) under typical ventilation. - Covers use in room size of 34 m³ - Covers exposure up to 0.03 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fuel. Liquid: Home space heater fuel

Unless otherwise stated. Covers concentrations up to 100% - Covers use up to 365 days/year - Covers use up to 1 application per day - Covers skin contact area up to 210 cm² - For each use event, covers use amounts up to 3000g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers exposure up to 0.03 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Fuel. Liquid: Lamp oil

Unless otherwise stated. Covers concentrations up to 100% - Covers use up to 52 days/year - Covers use up to 1 application per day - Covers skin contact area up to 210 cm² - For each use event, covers use amounts up to 100g - Covers use under typical household ventilation. - Covers use in room size of 20m³ - Covers use up to 0.01 hr/per task: - No specific risk management measure identified beyond those operational conditions stated.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not available.

Exposure estimation and reference to its source - Environment: 1: Use as a fuel

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Consumers: 0: Use as a fuel

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. - Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. - Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use as Functional Fluids - Consumer

List of use descriptors : **Identified use name:** Use as functional fluids. - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.13c
Market sector by type of chemical product: PC16, PC17

Environmental contributing scenarios : **Use as functional fluids.**

Health Contributing Scenarios : **Use as functional fluids.**

Processes and activities covered by the exposure scenario : Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use as functional fluids.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Concentration of substance in mixture or article :

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 20
Fraction of Regional tonnage used locally: 2.2
Annual site tonnage (tonnes/year): 0.01
Maximum daily site tonnage (kg/day): 0.027

Frequency and duration of use : Emission Days (days/year): 365 - Continuous release.

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.05
Release fraction to wastewater from wide dispersive use: 0.025
Release fraction to soil from wide dispersive use (regional only): 0.025

Conditions and measures related to municipal sewage treatment plant : Risk from environmental exposure is driven by freshwater.
Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 33
Assumed on-site sewage treatment plant flow (m^3/d): 2000

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

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| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |
|--|---|

Contributing scenario controlling consumer exposure for 0: Use as functional fluids.

| | |
|---|---|
| Concentration of substance in mixture or article | : Unless otherwise stated. Covers concentrations up to 100% |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. - Vapor pressure 200 Pa |
| Amounts used | : Covers skin contact area up to 468 cm ² - Unless otherwise stated, Covers concentrations up to 2200g |
| Frequency and duration of use | : Covers exposure up to 0.167 hr/per task: - Exposure duration per day: 0.01 |
| Other given operational conditions affecting consumers exposure | : Unless otherwise stated. Assumes activities are at ambient temperature (unless stated differently). - Covers use in room size of 20m ³ - Provide adequate ventilation. |
| Product Category(ies) - Operational conditions and risk management measures Heat transfer agents, liquid, Fluid. Unless otherwise stated, Covers concentrations up to 100% - Covers exposure up to 1 application per day - Covers use up to 4 days/year - Covers skin contact area up to 468 cm ² - For each use event, covers use amounts up to 2200 g. - Covers use in a one car garage (34 m ³) under typical ventilation. - Covers use in room size of 34 m ³ - Covers exposure up to 0.17 hr/per task: - No specific risk management measure identified beyond those operational conditions stated. Hydraulic fluids and additives, liquid Unless otherwise stated. Covers concentrations up to 100% - Covers use up to 4 days/year - Covers use up to 1 application per day - Covers skin contact area up to 468 cm ² - For each use event, covers use amounts up to 2200 g. - Covers use in room size of 34 m ³ - Covers exposure up to 0.17 hr/per task: - Covers use in a one car garage (34 m ³) under typical ventilation. - No specific risk management measure identified beyond those operational conditions stated. | |

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

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|-----------------|------------------|
| Website: | : Not available. |
|-----------------|------------------|

Exposure estimation and reference to its source - Environment: 1: Use as functional fluids.

| | |
|---|--|
| Exposure assessment (environment): | : Not available. |
| Exposure estimation | : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model. |

Exposure estimation and reference to its source - Consumers: 0: Use as functional fluids.

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| Exposure assessment (human): | : Not available. |
| Exposure estimation | : The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated. |

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

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| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. - Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. - Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA**Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Cleaning Agents - Professional

List of use descriptors : **Identified use name:** Use in Cleaning Agents - Professional
Process Category: PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC10, PROC11, PROC13
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.4b.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use in Cleaning Agents**

Health Contributing Scenarios : **Use in Cleaning Agents**

Processes and activities covered by the exposure scenario : Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Cleaning Agents

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):340
Fraction of Regional tonnage used locally:0.0005
Annual site tonnage (tonnes/year):0.17
Maximum daily site tonnage (kg/day):0.47

Frequency and duration of use : Continuous release. Emission Days (days/year):365

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only):0.02
Release fraction to wastewater from wide dispersive use:0.000001
Release fraction to soil from wide dispersive use (regional only):0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%):N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0

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| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d):580 Assumed on-site sewage treatment plant flow (m^3/d):2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in Cleaning Agents

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| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. Contributing Scenarios - Operational conditions and risk management measures Filling/preparation of equipment from drums or containers No other specific measures identified. Automatic processing with: (semi) Closed system - Use in contained systems No other specific measures identified. Automatic processing with: (semi) Closed system - Drum/batch transfers - Use in contained systems No other specific measures identified. Semi-automated process. (e.g. Semi-automatic application of floor care and maintenance products) No other specific measures identified. Filling/preparation of equipment from drums or containers No other specific measures identified. Manual Surfaces Cleaning Dipping, immersion and pouring No other specific measures identified. Cleaning with low-pressure washers - Rolling, Brushing no spraying No other specific measures identified. Cleaning with high-pressure washers - Spraying Indoor. Provide enhanced general ventilation by mechanical means. Cleaning with high-pressure washers - Spraying Outdoor. Ensure operation is undertaken outdoors. - Limit the substance content in the product to 25%. Manual Cleaning Spraying No other specific measures identified. |

Ad hoc manual application via trigger sprays, dipping etc. Rolling, Brushing
No other specific measures identified.

Application of cleaning products in closed systems Outdoor.
No other specific measures identified.

Cleaning of medical devices
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Cleaning Agents

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use in Cleaning Agents

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Risk Management Measures are based on qualitative risk characterisation. Available hazard data do not support the need for a DNEL to be established for other health effects. Users are advised to consider national Occupational Exposure Limits or other equivalent values. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Uses in Cleaning Agent - Industrial

List of use descriptors : **Identified use name:** Use in Cleaning Agents - Industrial
Process Category: PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC10, PROC13
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ESVOC SpERC 4.4a.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use in Cleaning Agents**

Health Contributing Scenarios : **Use in Cleaning Agents**

Industry Association : ESIG

Processes and activities covered by the exposure scenario : Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Cleaning Agents

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):1400
Fraction of Regional tonnage used locally:0.071
Annual site tonnage (tonnes/year):100
Maximum daily site tonnage (kg/day):5000

Frequency and duration of use : Continuous release. Emission Days (days/year):20

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM):1.0
Release fraction to wastewater from process (initial release prior to RMM):0.00003
Release fraction to soil from process (initial release prior to RMM):0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by soil.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%):70
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0

| | |
|--|--|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d):5100000 Assumed on-site sewage treatment plant flow (m^3/d):2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in Cleaning Agents

| | |
|--|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes a good basic standard of occupational hygiene is implemented. Assumes use at not more than 20°C above ambient temperature, unless stated differently. Contributing Scenarios - Operational conditions and risk management measures Bulk transfers No other specific measures identified. Automatic processing with: (semi) Closed system - Use in contained systems No other specific measures identified. Automatic processing with: (semi) Drum/batch transfers No other specific measures identified. Application of cleaning products in closed systems No other specific measures identified. Filling/preparation of equipment from drums or containers No other specific measures identified. Use in contained batch processes No other specific measures identified. Degreasing small objects in cleaning station No other specific measures identified. Cleaning with low-pressure washers No other specific measures identified. Cleaning with high-pressure washers Provide enhanced general ventilation by mechanical means. Manual Surfaces Cleaning No other specific measures identified. |

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Cleaning Agents

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use in Cleaning Agents

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Lubricant - Professional: Low environmental Release

List of use descriptors : **Identified use name:** Use in Lubricants.-Professional: low Environmental Release Category
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC10, PROC11, PROC13, PROC17, PROC18, PROC20
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOV SpERC 9.6b.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use in Lubricants.**

Health Contributing Scenarios : **Use in Lubricants.**

Processes and activities covered by the exposure scenario : Covers the use of formulated lubricants within closed or contained systems including incidental exposures during material transfers, operation of machinery/engines and similar articles, equipment maintenance and disposal of wastes.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Lubricants.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 35 kTm/Year
Fraction of Regional tonnage used locally: 1
Annual site tonnage (tonnes/year): 0.018
Maximum daily site tonnage (kg/day): 0.048

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.15
Release fraction to wastewater from wide dispersive use: 0.05
Release fraction to soil from wide dispersive use (regional only): 0.05

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide the required removal efficiency of (%): N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

| | |
|--|--|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m³/d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 52 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in Lubricants.

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. Contributing Scenarios - Operational conditions and risk management measures General exposures (closed systems) No other specific measures identified. General exposures (open systems) No other specific measures identified. Operation of equipment containing engine oils and similar No other specific measures identified. Bulk transfers No other specific measures identified. Filling/preparation of equipment from drums or containers - Dedicated facility No other specific measures identified. Filling/preparation of equipment from drums or containers - Non-dedicated facility No other specific measures identified. Operation and lubrication of high energy open equipment - Indoor. No other specific measures identified. Operation and lubrication of high energy open equipment No other specific measures identified. Manual applications e.g. brushing, rolling No other specific measures identified. Treatment by dipping and pouring No other specific measures identified. |

Maintenance (of larger plant items) and machine set-up. - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Maintenance (of larger plant items) and machine set-up.
No other specific measures identified.

Operation and lubrication of high energy open equipment - Outdoor.
No other specific measures identified.

Maintenance of small items - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Engine lubricant service
No other specific measures identified.

Spraying
Provide enhanced general ventilation by mechanical means.

Material storage
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Lubricants.

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use in Lubricants.

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Lubricant - Professional: High environmental Release

List of use descriptors : **Identified use name:** Use in Lubricants.-Industrial: high Environmental Release Category
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC10, PROC11, PROC13, PROC17, PROC18, PROC20
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.6c.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use in Lubricants.**

Health Contributing Scenarios : **Use in Lubricants.**

Processes and activities covered by the exposure scenario : Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Lubricants.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 35 kTm/Year
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage (tonnes/year): 0.018
Maximum daily site tonnage (kg/day): 0.048

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.15
Release fraction to wastewater from wide dispersive use: 0.05
Release fraction to soil from wide dispersive use (regional only): 0.05

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide the required removal efficiency of (%): 0
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

| | |
|--|--|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m³/d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 57 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in Lubricants.

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. Contributing Scenarios - Operational conditions and risk management measures General exposures (closed systems) No other specific measures identified. General exposures (open systems) No other specific measures identified. Operation of equipment containing engine oils and similar No other specific measures identified. Bulk transfers No other specific measures identified. Filling/preparation of equipment from drums or containers - Dedicated facility No other specific measures identified. Filling/preparation of equipment from drums or containers - Non-dedicated facility No other specific measures identified. Operation and lubrication of high energy open equipment - Indoor. No other specific measures identified. Operation and lubrication of high energy open equipment No other specific measures identified. Manual applications e.g. brushing, rolling No other specific measures identified. Treatment by dipping and pouring No other specific measures identified. |

Maintenance (of larger plant items) and machine set-up. - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Maintenance (of larger plant items) and machine set-up.
No other specific measures identified.

Operation and lubrication of high energy open equipment - Outdoor.
No other specific measures identified.

Maintenance of small items - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Engine lubricant service
No other specific measures identified.

Spraying
Provide enhanced general ventilation by mechanical means.

Material storage
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Lubricants.

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use in Lubricants.

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Lubricants - Industrial

List of use descriptors : **Identified use name:** Use in Lubricants. - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC17, PROC18
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC07, ESVOC SpERC 4.6a.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use in Lubricants.**

Health Contributing Scenarios : **Use in Lubricants.**

Industry Association : Concawe

Processes and activities covered by the exposure scenario : Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Lubricants.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 10
Fraction of Regional tonnage used locally: 1
Annual site tonnage (tonnes/year): 10
Maximum daily site tonnage (kg/day): 500

Frequency and duration of use : Continuous release. - Emission Days (days/year): 20

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.005
Release fraction to wastewater from process (initial release prior to RMM): 0.000003
Release fraction to soil from process (initial release prior to RMM): 0.001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
Prevent discharge of undissolved substance to or recover from onsite wastewater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): 70
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

| | |
|--|--|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. - sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 570000 Assumed on-site sewage treatment plant flow (m^3/d): 2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in Lubricants.

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

General exposures (closed systems)
No other specific measures identified.

General exposures (open systems)
No other specific measures identified.

Bulk transfers
No other specific measures identified.

Filling/preparation of equipment from drums or containers
No other specific measures identified.

Initial factory fill of equipment
No other specific measures identified.

Operation and lubrication of high energy open equipment
No other specific measures identified.

Manual applications e.g. brushing, rolling
No other specific measures identified.

Treatment by dipping and pouring
Allow time for product to drain from workpiece.

Spraying
Provide enhanced general ventilation by mechanical means.

Maintenance (of larger plant items) and machine set-up.
No other specific measures identified.

Maintenance (of larger plant items) and machine set-up. - Operation is carried out at

elevated temperature (> 20°C above ambient temperature).
 Drain down and flush system prior to equipment break-in or maintenance.

Remanufacture of reject articles
 No other specific measures identified.

Maintenance of small items
 Avoid manual contact with wet work pieces.

Material storage
 Store substance within a closed system. - Transfer via enclosed lines.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Lubricants.

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use in Lubricants.

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Metal Working Fluids/Rolling Oilst - Industrial

List of use descriptors : **Identified use name:** Use in Metal working fluids/rolling oils - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC17
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ESVOC SpERC 4.7a.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Metal working fluids/rolling oils**

Health Contributing Scenarios : **Metal working fluids/rolling oils**

Processes and activities covered by the exposure scenario : Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Metal working fluids/rolling oils

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 100
Fraction of Regional tonnage used locally: 1
Annual site tonnage (tonnes/year): 100
Maximum daily site tonnage (kg/day): 5000

Frequency and duration of use : Continuous release.
Emission Days (days/year): 20

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.02
Release fraction to wastewater from process (initial release prior to RMM): 0.0003
Release fraction to soil from process (initial release prior to RMM): 0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide the required removal efficiency of (%): 70
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

| | |
|--|---|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m³/d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 6400000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Metal working fluids/rolling oils

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

General exposures (closed systems)
No other specific measures identified.

General exposures (open systems)
No other specific measures identified.

Bulk transfers
No other specific measures identified.

Filling/preparation of equipment from drums or containers
No other specific measures identified.

Material storage
No other specific measures identified.

Process sampling
No other specific measures identified.

Metal machining operations
No other specific measures identified.

Treatment by dipping and pouring
No other specific measures identified.

Spraying
Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.

Manual applications e.g. brushing, rolling

No other specific measures identified.

Automated metal rolling/forming - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Semi-automated metal rolling/forming - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Equipment cleaning and maintenance - Dedicated facility
No other specific measures identified.

Equipment cleaning and maintenance - Non-dedicated facility
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source - Environment: 1: Metal working fluids/rolling oils

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Metal working fluids/rolling oils

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Metal Working Fluids/Rolling Oilst - Professional

List of use descriptors : **Identified use name:** Use in Metal working fluids/rolling oils - Professional
Process Category: PROC01, PROC02, PROC03, PROC08b, PROC09, PROC10, PROC11, PROC13, PROC17
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC09a, ESVOC SpERC 8.7c.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Metal working fluids/rolling oils**

Health Contributing Scenarios : **Metal working fluids/rolling oils**

Processes and activities covered by the exposure scenario : Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Metal working fluids/rolling oils

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 19
Fraction of Regional tonnage used locally: 1
Annual site tonnage (tonnes/year): 0.0093
Maximum daily site tonnage (kg/day): 0.025

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.015
Release fraction to wastewater from wide dispersive use: 0.05
Release fraction to soil from wide dispersive use (regional only): 0.05

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

| | |
|--|--|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m³/d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 29 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Metal working fluids/rolling oils

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

General exposures (closed systems)
No other specific measures identified.

Bulk transfers
No other specific measures identified.

Filling/preparation of equipment from drums or containers - Dedicated facility
No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility
No other specific measures identified.

Material storage
No other specific measures identified.

Process sampling
No other specific measures identified.

Metal machining operations
No other specific measures identified.

Treatment by dipping and pouring
No other specific measures identified.

Spraying
Provide enhanced general ventilation by mechanical means.

Manual applications e.g. brushing, rolling
No other specific measures identified.

Equipment cleaning and maintenance - Dedicated facility
No other specific measures identified.

Equipment cleaning and maintenance - Non-dedicated facility
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source - Environment: 1: Metal working fluids/rolling oils

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Metal working fluids/rolling oils

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Health : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Agrochemicals - Professional

List of use descriptors : **Identified use name:** Use in Agrochemicals - Professional
Process Category: PROC01, PROC02, PROC04, PROC08a, PROC08b, PROC11, PROC13
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.11a.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : Use in Agrochemicals

Health Contributing Scenarios : Use in Agrochemicals

Processes and activities covered by the exposure scenario : Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging; including equipment clean-downs and disposal.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in Agrochemicals

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 9.6
Fraction of Regional tonnage used locally: 0.0019
Annual site tonnage (tonnes/year): 0.019
Maximum daily site tonnage (kg/day): 0.053

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.9
Release fraction to wastewater from wide dispersive use: 0.01
Release fraction to soil from wide dispersive use (regional only): 0.09

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils.
sludge should be incinerated, contained or reclaimed.

| | |
|--|---|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Assumed on-site sewage treatment plant flow (m ³ /d):2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 63 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in Agrochemicals

| | |
|--|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

Transfer from/pouring from containers
No other specific measures identified.

Mixing in containers
No other specific measures identified.

Spraying/fogging by manual application
Wear a respirator conforming to EN140 with Type A/P2 filter or better. - Apply within a vented cab supplied with filtered air under positive pressure and with a protection factor of >20 (professional use)

Ad hoc manual application via trigger sprays, dipping etc.
No other specific measures identified.

Clean-down and maintenance of equipment
No other specific measures identified.

Disposal. waste
No other specific measures identified.

Material storage
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in Agrochemicals

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use in Agrochemicals

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use as a Fuel - Industrial

List of use descriptors : **Identified use name:** Use as a fuel - Industrial
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC07, ESVOC SpERC 7.12a.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : Use as a fuel

Health Contributing Scenarios : Use as a fuel

Processes and activities covered by the exposure scenario : Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use as a fuel

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 10
Fraction of Regional tonnage used locally: 1
Annual site tonnage (tonnes/year): 100
Maximum daily site tonnage (kg/day): 5000

Frequency and duration of use : Continuous release. - Emission Days (days/year): 20

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.005
Release fraction to wastewater from process (initial release prior to RMM): 0.00001
Release fraction to soil from process (initial release prior to RMM): 0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater sediment.
No wastewater treatment required.
Prevent discharge of undissolved substance to or recover from onsite wastewater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): 95
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

| | |
|--|---|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. - sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): 1900000 Assumed on-site sewage treatment plant flow (m^3/d): 2000 |
| Conditions and measures related to external treatment of waste for disposal | : Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment. External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. - This substance is consumed during use and no waste from the substance is generated. |

Contributing scenario controlling worker exposure for 0: Use as a fuel

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

General exposures (closed systems)
No other specific measures identified.

Bulk transfers
No other specific measures identified.

Material storage
No other specific measures identified.

Drum/batch transfers
No other specific measures identified.

Use as a fuel - Closed system
No other specific measures identified.

Equipment cleaning and maintenance
No other specific measures identified.

Vessel and container cleaning
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use as a fuel

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use as a fuel

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use as a Fuel - Professional

List of use descriptors : **Identified use name:** Use as a fuel - Professional
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: As such
Sector of end use: SU03, SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.12b.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : Use as a fuel

Health Contributing Scenarios : Use as a fuel

Processes and activities covered by the exposure scenario : Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use as a fuel

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 100
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage (tonnes/year): 0.05
Maximum daily site tonnage (kg/day): 0.14

Frequency and duration of use : Continuous release. - Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.0001
Release fraction to wastewater from process (initial release prior to RMM): 0.00001
Release fraction to soil from process (initial release prior to RMM): 0.00001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. - sludge should be incinerated, contained or reclaimed.

| | |
|--|---|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M_{safe}) based on release following total wastewater treatment removal (kg/d): 170 Assumed on-site sewage treatment plant flow (m^3/d): 2000 |
| Conditions and measures related to external treatment of waste for disposal | : Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment. External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : This substance is consumed during use and no waste from the substance is generated. |

Contributing scenario controlling worker exposure for 0: Use as a fuel

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

General exposures (closed systems)
No other specific measures identified.

Bulk transfers
No other specific measures identified.

Material storage
No other specific measures identified.

Drum/batch transfers
No other specific measures identified.

Use as a fuel - Closed system
No other specific measures identified.

Equipment cleaning and maintenance
No other specific measures identified.

Vessel and container cleaning
No other specific measures identified.

General exposures
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use as a fuel

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use as a fuel

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use as Functional Fluids - Industrial

List of use descriptors : **Identified use name:** Use as functional fluids. - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC07, ESVOC SpERC 7.13a.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use as functional fluids.**

Health Contributing Scenarios : **Use as functional fluids.**

Processes and activities covered by the exposure scenario : Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in closed industrial equipment including incidental exposures during maintenance and related material transfers

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use as functional fluids.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 100
Fraction of Regional tonnage used locally: 1
Annual site tonnage (tonnes/year): 10
Maximum daily site tonnage (kg/day): 500

Frequency and duration of use : Continuous release.
Emission Days (days/year): 20

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.000003
Release fraction to wastewater from process (initial release prior to RMM): 0.005
Release fraction to soil from process (initial release prior to RMM): 0.001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide the required removal efficiency of (%): 0
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils.
sludge should be incinerated, contained or reclaimed.

| | |
|--|---|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m ³ /d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 570000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use as functional fluids.

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

General exposures (closed systems)
No other specific measures identified.

General exposures (open systems)
No other specific measures identified.

Bulk transfers (Closed system)
No other specific measures identified.

Filling/preparation of equipment from drums or containers
No other specific measures identified.

Material storage
No other specific measures identified.

Remanufacture of reject articles
No other specific measures identified.

Equipment maintenance
No other specific measures identified.

Drum/batch transfers
No other specific measures identified.

Filling of articles/equipment (Closed system)
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use as functional fluids.

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use as functional fluids.

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Distribution of the Substance - Industrial

List of use descriptors : **Identified use name:** Distribution of substance - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01, ERC02, ESVOC SpERC 1.1b.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Distribution of substance**

Health Contributing Scenarios : **Distribution of substance**

Processes and activities covered by the exposure scenario : Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Distribution of substance

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):1700
Fraction of Regional tonnage used locally:0.002
Annual site tonnage (tonnes/year):3.4
Maximum daily site tonnage (kg/day):170

Frequency and duration of use : Continuous release. Emission Days (days/year):20

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM):0.001
Release fraction to wastewater from process (initial release prior to RMM):0.00001
Release fraction to soil from process (initial release prior to RMM):0.00001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater. No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%):90
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed.

| | |
|--|--|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M_{safe}) based on release following total wastewater treatment removal (kg/d):210000 Assumed on-site sewage treatment plant flow (m^3/d):2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Distribution of substance

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP |
| Amounts used | : Not applicable. |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. |
| | Contributing Scenarios-Operational conditions and risk management measures |
| | General exposures (closed systems) No other specific measures identified. |
| | General exposures (open systems) No other specific measures identified. |
| | Process sampling No other specific measures identified. |
| | Laboratory activities No other specific measures identified. |
| | Bulk transfers (closed systems) No other specific measures identified. |
| | Bulk transfers (open systems) No other specific measures identified. |
| | Drum and small package filling No other specific measures identified. |
| | Equipment cleaning and maintenance No other specific measures identified. |
| | Storage No other specific measures identified. |

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Distribution of substance

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Distribution of substance

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Manufacture of Substance - Industrial

List of use descriptors : **Identified use name:** Manufacture of substance -Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01, ERC04, ESVOC SpERC 1.1.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Manufacture of substance**

Health Contributing Scenarios : **Manufacture of substance**

Industry Association : ESIG

Processes and activities covered by the exposure scenario : Manufacture of the substance or use as a process chemical or extraction agent. Includes recycling/recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Manufacture of substance

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):17000
Fraction of Regional tonnage used locally:1
Annual site tonnage (tonnes/year):17000
Maximum daily site tonnage (kg/day):56000

Frequency and duration of use : Continuous release. Emission Days (days/year):300

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM):1.0e-2
Release fraction to wastewater from process (initial release prior to RMM):3.0e-4
Release fraction to soil from process (initial release prior to RMM):0.0001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%):90
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0

| | |
|--|---|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d):3200000 Assumed on-site sewage treatment plant flow (m^3/d):10000 |
| Conditions and measures related to external treatment of waste for disposal | : During manufacturing, no waste of the substance is generated. External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : During manufacturing, no waste of the substance is generated. External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Manufacture of substance

| | |
|---|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP |
| Amounts used | : Not applicable. |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented. Contributing Scenarios-Operational conditions and risk management measures General exposures (closed systems) No other specific measures identified. General exposures (open systems) No other specific measures identified. Process sampling No other specific measures identified. Laboratory activities No other specific measures identified. General exposures (open systems) No other specific measures identified. Bulk transfers No other specific measures identified. Equipment cleaning and maintenance No other specific measures identified. Storage No other specific measures identified. |
| Conditions and measures related to personal protection and hygiene | |

Section 3: - Exposure estimation and reference to its source

Website: : Further information on the assumptions contained in this Exposure Scenario can be found at:
<http://www.esig.org/>

Exposure estimation and reference to its source - Environment: 1: Manufacture of substance

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Manufacture of substance

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. Scaled local assessments for EU refineries have been performed using site-specific data and are attached in PETRORISK file - "Site-Specific Production" worksheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Formulation and (re)packing of substances and mixtures - Industrial

List of use descriptors : **Identified use name:** Formulation and (re)packing of substances and mixtures - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02, ESVOC SpERC 2.2.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Formulation and (re)packing of substances and mixtures**

Health Contributing Scenarios : **Formulation and (re)packing of substances and mixtures**

Industry Association : ESIG

Processes and activities covered by the exposure scenario : Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Formulation and (re)packing of substances and mixtures

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):2400
Fraction of Regional tonnage used locally:1
Annual site tonnage (tonnes/year):2400
Maximum daily site tonnage (kg/day):7800

Frequency and duration of use : Continuous release. Emission Days (days/year):300

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements):1.0e-2
Release fraction to wastewater from process (initial release prior to RMM):0.002
Release fraction to soil from process (initial release prior to RMM):0.0001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|--|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. No wastewater treatment required. Treat air emission to provide a typical removal efficiency of (%):0 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):0 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0 |
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M_{safe}) based on release following total wastewater treatment removal (kg/d):950000 Assumed on-site sewage treatment plant flow (m^3/d):2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Formulation and (re)packing of substances and mixtures

| | |
|--|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP |
| Amounts used | : Not applicable. |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. Contributing Scenarios-Operational conditions and risk management measures General exposures (closed systems) No other specific measures identified. General exposures (open systems) No other specific measures identified. Batch process, elevated temperature Operation is carried out at elevated temperature (> 20°C above ambient temperature). No other specific measures identified. Process sampling No other specific measures identified. Laboratory activities No other specific measures identified. Bulk transfers No other specific measures identified. Mixing operations (open systems) No other specific measures identified. |

Manual-Transfer from/pouring from containers
No other specific measures identified.

Drum/batch transfers
No other specific measures identified.

Production of preparation or articles by tableting, compression, extrusion or pelletisation
No other specific measures identified.

Drum and small package filling
No other specific measures identified.

Equipment cleaning and maintenance
No other specific measures identified.

Storage
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Formulation and (re)packing of substances and mixtures

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Formulation and (re)packing of substances and mixtures

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Uso como combustible - Industrial

List of use descriptors : **Identified use name:** Manufacture of substance -Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01, ERC04, ESVOC SpERC 1.1.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use as a fuel**

Health Contributing Scenarios : **Use as a fuel**

Industry Association : ESIG

Processes and activities covered by the exposure scenario : Manufacture of the substance or use as a process chemical or extraction agent. Includes recycling/recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use as a fuel

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):17000
Fraction of Regional tonnage used locally:1
Annual site tonnage (tonnes/year):17000
Maximum daily site tonnage (kg/day):56000

Frequency and duration of use : Continuous release. Emission Days (days/year):300

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM):1.0e-2
Release fraction to wastewater from process (initial release prior to RMM):3.0e-4
Release fraction to soil from process (initial release prior to RMM):0.0001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%):90
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0

| | |
|--|---|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d):3200000 Assumed on-site sewage treatment plant flow (m^3/d):10000 |
| Conditions and measures related to external treatment of waste for disposal | : During manufacturing, no waste of the substance is generated. External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : During manufacturing, no waste of the substance is generated. External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use as a fuel

| | |
|---|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP |
| Amounts used | : Not applicable. |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented. |
| | Contributing Scenarios-Operational conditions and risk management measures |
| | General exposures (closed systems) No other specific measures identified. |
| | General exposures (open systems) No other specific measures identified. |
| | Process sampling No other specific measures identified. |
| | Laboratory activities No other specific measures identified. |
| | General exposures (open systems) No other specific measures identified. |
| | Bulk transfers No other specific measures identified. |
| | Equipment cleaning and maintenance No other specific measures identified. |
| | Storage No other specific measures identified. |
| Conditions and measures related to personal protection and hygiene | |

Section 3: - Exposure estimation and reference to its source

Website: : Further information on the assumptions contained in this Exposure Scenario can be found at:
<http://www.esig.org/>

Exposure estimation and reference to its source - Environment: 1: Use as a fuel

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use as a fuel

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. Scaled local assessments for EU refineries have been performed using site-specific data and are attached in PETRORISK file - "Site-Specific Production" worksheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Uses in Coatings - Industrial

List of use descriptors : **Identified use name:** Uses in Coatings - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC15
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ESVOC SpERC 4.3a.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Uses in Coatings**

Health Contributing Scenarios : **Uses in Coatings**

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) within closed or contained systems including incidental exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application activities and film formation) and equipment cleaning, maintenance and associated laboratory activities.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Uses in Coatings

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):4300
Fraction of Regional tonnage used locally:1
Annual site tonnage (tonnes/year):4300
Maximum daily site tonnage (kg/day):43000

Frequency and duration of use : Continuous release. Emission Days (days/year):100

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM):0.98
Release fraction to wastewater from process (initial release prior to RMM):0.007
Release fraction to soil from process (initial release prior to RMM):0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater sediment.
Prevent discharge of undissolved substance to or recover from onsite wastewater.
If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%):90
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):59.8
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0

| | |
|--|---|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d):270000 Assumed on-site sewage treatment plant flow (m ³ /d):2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Uses in Coatings

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP |
| Amounts used | : Not applicable. |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. Contributing Scenarios-Operational conditions and risk management measures General exposures (closed systems) No other specific measures identified. General exposures (closed systems) with sample collection No other specific measures identified. Film formation - force drying (50 - 100°C). Stoving (>100°C). UV/EB radiation curing No other specific measures identified. Mixing operations (closed systems) No other specific measures identified. Film formation - air drying No other specific measures identified. Preparation of material for application Mixing operations (open systems) No other specific measures identified. Spraying (automatic/robotic) Carry out in a vented booth or extracted enclosure. Spraying/fogging by manual application Provide enhanced general ventilation by mechanical means. Material transfers No other specific measures identified. Roller, spreader, flow application No other specific measures identified. |

Dipping, immersion and pouring
No other specific measures identified.

Laboratory activities
No other specific measures identified.

Material transfers Drum/batch transfers Transfer from/pouring from containers
No other specific measures identified.

Production of preparation or articles by tableting, compression, extrusion or pelletisation
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Uses in Coatings

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Uses in Coatings

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use as Functional Fluids - Professional

List of use descriptors : **Identified use name:** Use as functional fluids. - Professional
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC09, PROC20
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.13b
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use as functional fluids.**

Health Contributing Scenarios : **Use as functional fluids.**

Processes and activities covered by the exposure scenario : Use as functional fluids e.g. cable oils, transfer oils, insulators, refrigerants, hydraulic fluids in closed professional equipment including incidental exposures during maintenance and related material transfers.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use as functional fluids.

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 100
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage (tonnes/year): 0.05
Maximum daily site tonnage (kg/day): 0.14

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.05
Release fraction to wastewater from wide dispersive use: 0.025
Release fraction to soil from wide dispersive use (regional only): 0.025

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils.
sludge should be incinerated, contained or reclaimed.

| | |
|--|--|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m ³ /d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 140 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use as functional fluids.

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

General exposures (closed systems)
No other specific measures identified.

General exposures (open systems)
No other specific measures identified.

General exposures (open systems) Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Filling/preparation of equipment from drums or containers
No other specific measures identified.

Transfer from/pouring from containers
No other specific measures identified.

Material storage
No other specific measures identified.

Equipment maintenance
No other specific measures identified.

Remanufacture of reject articles
No other specific measures identified.

Drum/batch transfers
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use as functional fluids.

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Use as functional fluids.

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Laboratories - Professional

List of use descriptors : **Identified use name:** Use in laboratories - Professional
Process Category: PROC10, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, SVOC SpERC 8.17
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use in laboratories**

Health Contributing Scenarios : **Use in laboratories**

Processes and activities covered by the exposure scenario : Use of the substance within laboratory settings, including material transfers and equipment cleaning.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in laboratories

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 0.01
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage (tonnes/year): 0.000005
Maximum daily site tonnage (kg/day): 0.000014

Frequency and duration of use : Continuous release. - Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.5
Release fraction to wastewater from wide dispersive use: 0.5
Release fraction to soil from wide dispersive use (regional only): 0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): 0
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. - sludge should be incinerated, contained or reclaimed.

| | |
|--|---|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M_{safe}) based on release following total wastewater treatment removal (kg/d): 0.017 Assumed on-site sewage treatment plant flow (m^3/d): 2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in laboratories

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

Laboratory activities
No other specific measures identified.

Cleaning
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

| | |
|-----------------|-------------------|
| Website: | : Not applicable. |
|-----------------|-------------------|

Exposure estimation and reference to its source - Environment: 1: Use in laboratories

| | |
|---|--|
| Exposure assessment (environment): | : Not available. |
| Exposure estimation | : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model. |

Exposure estimation and reference to its source - Workers: 0: Use in laboratories

| | |
|-------------------------------------|---|
| Exposure assessment (human): | : Not available. |
| Exposure estimation | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Road and Construction Applications - Professional

List of use descriptors : **Identified use name:** Uses Road and construction applications - Professional
Process Category: PROC08a, PROC08b, PROC10, PROC11, PROC13
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08d, ERC08f, ESVOC SpERC 8.15.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Road and construction applications**

Health Contributing Scenarios : **Road and construction applications**

Processes and activities covered by the exposure scenario : Application of surface coatings and binders in road and construction activities, including paving uses, manual mastic and in the application of roofing and water-proofing membranes.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Road and construction applications

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 190
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage (tonnes/year): 0.093
Maximum daily site tonnage (kg/day): 0.25

Frequency and duration of use : Continuous release.
Emission Days (days/year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.95
Release fraction to wastewater from wide dispersive use: 0.01
Release fraction to soil from wide dispersive use (regional only): 0.04

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils.
sludge should be incinerated, contained or reclaimed.

| | |
|--|--|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m ³ /d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d): 270 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Road and construction applications

| | |
|--|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

Drum/batch transfers - Non-dedicated facility
No other specific measures identified.

Drum/batch transfers - Dedicated facility
No other specific measures identified.

Spraying/fogging by machine application - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
Wear a respirator conforming to EN140 with Type A/P2 filter or better.

Manual applications e.g. brushing, rolling
No other specific measures identified.

Drum/batch transfers - Dedicated facility - Operation is carried out at elevated temperature (> 20°C above ambient temperature).
No other specific measures identified.

Spraying/fogging by machine application
Wear a respirator conforming to EN140 with Type A/P2 filter or better.

Dipping, immersion and pouring
No other specific measures identified.

Equipment cleaning and maintenance
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Road and construction applications

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Road and construction applications

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Use in Laboratories - Industrial

List of use descriptors : **Identified use name:** Use in laboratories - Industrial
Process Category: PROC10, PROC15
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02, ERC04
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Use in laboratories**

Health Contributing Scenarios : **Use in laboratories**

Processes and activities covered by the exposure scenario : Use of the substance within laboratory settings, including material transfers and equipment cleaning.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Use in laboratories

Product characteristics : Substance is complex UVCB - Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 0.01
Fraction of Regional tonnage used locally: 1
Annual site tonnage (tonnes/year): 0.01
Maximum daily site tonnage (kg/day): 0.5

Frequency and duration of use : Continuous release.
Emission Days (days/year): 20

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.025
Release fraction to wastewater from process (initial release prior to RMM): 0.02
Release fraction to soil from process (initial release prior to RMM): 0.0001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by freshwater.
No wastewater treatment required.
Treat air emission to provide the required removal efficiency of (%): 0
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils.
sludge should be incinerated, contained or reclaimed.

| | |
|--|--|
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%): 93.7 Assumed on-site sewage treatment plant flow (m ³ /d): 2000 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%): 93.7 Maximum allowable site tonnage (M _{safe}) based on release following total wastewater treatment removal (kg/d): 390 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Use in laboratories

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP. |
| Amounts used | : No Limit |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. - Assumes a good basic standard of occupational hygiene is implemented. |

Contributing Scenarios - Operational conditions and risk management measures

Laboratory activities
No other specific measures identified.

Cleaning
No other specific measures identified.

Conditions and measures related to personal protection and hygiene**Section 3: - Exposure estimation and reference to its source**

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Use in laboratories

| | |
|---|--|
| Exposure assessment (environment): | : Not available. |
| Exposure estimation | : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model. |

Exposure estimation and reference to its source - Workers: 0: Use in laboratories

| | |
|-------------------------------------|---|
| Exposure assessment (human): | : Not available. |
| Exposure estimation | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Identification of the substance or mixture

Product definition : UVCB
Content in Benzene < 0.1% w/w.

Code : 325490000

Product name : PETROSOL 15A 15/20

Section 1: - Title

Short title of the exposure scenario : [919-446-0] Uses in Coatings - Professional

List of use descriptors : **Identified use name:** Uses in Coatings-Professional
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC10, PROC11, PROC13, PROC15, PROC19
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.3b.v1
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Uses in Coatings**

Health Contributing Scenarios : **Uses in Coatings**

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities.

Section 2: - Exposure controls

Contributing scenario controlling environmental exposure for 0: Uses in Coatings

Product characteristics : Substance is complex UVCB Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region:0.1
Regional use tonnage (tonnes/year):1700
Fraction of Regional tonnage used locally:0.0005
Annual site tonnage (tonnes/year):0.84
Maximum daily site tonnage (kg/day):2.3

Frequency and duration of use : Continuous release. Emission Days (days/year):365

Environment factors not influenced by risk management : Local freshwater dilution factor:10
Local marine water dilution factor:100

Other given operational conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM):0.98
Release fraction to wastewater from process (initial release prior to RMM):0.0001
Release fraction to soil from process (initial release prior to RMM):0.01

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Risk from environmental exposure is driven by soil.
No wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%):N/A
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%):0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%):0

| | |
|--|---|
| Organizational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to municipal sewage treatment plant | : Estimated substance removal from wastewater via on-site sewage treatment (%):93.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs (%):93.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d):1900 Assumed on-site sewage treatment plant flow (m^3/d):2000 |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 0: Uses in Coatings

| | |
|--|---|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% (unless stated differently). |
| Physical state | : Liquid, vapour pressure < 0.5 kPa at STP |
| Amounts used | : Not applicable. |
| Frequency and duration of use | : Covers daily exposures up to 8 hours (unless stated differently). |
| Human factors not influenced by risk management | : Not applicable. |
| Other given operational conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented. Contributing Scenarios-Operational conditions and risk management measures General exposures (closed systems) Handle substance within a closed system. Filling/preparation of equipment from drums or containers Handle substance within a closed system. General exposures (closed systems) Use in contained systems Handle substance within a closed system. Preparation of material for application No other specific measures identified. Film formation - air drying Outdoor. No other specific measures identified. Film formation - air drying Indoor. No other specific measures identified. Preparation of material for application Indoor. No other specific measures identified. Preparation of material for application Indoor. No other specific measures identified. Material transfers Drum/batch transfers No other specific measures identified. Roller, spreader, flow application Indoor. No other specific measures identified. Roller, spreader, flow application Outdoor. No other specific measures identified. |

Manual Spraying Indoor.
Carry out in a vented booth or extracted enclosure.

Manual Spraying Outdoor.
Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours. Wear a respirator conforming to EN140 with Type A/P2 filter or better.

Dipping, immersion and pouring Indoor.
Avoid manual contact with wet work pieces.

Dipping, immersion and pouring Outdoor.
Avoid manual contact with wet work pieces.

Laboratory activities
No other specific measures identified.

Hand application - fingerpaints, pastels, adhesives Indoor.
No other specific measures identified.

Hand application - fingerpaints, pastels, adhesives Outdoor.
No other specific measures identified.

Conditions and measures related to personal protection and hygiene

Section 3: - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: Uses in Coatings

Exposure assessment (environment): : Not available.

Exposure estimation : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation and reference to its source - Workers: 0: Uses in Coatings

Exposure assessment (human): : Not available.

Exposure estimation : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Section 4: - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. |
| Health | : Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.