



SAFETY DATA SHEET

Redex Diesel System Cleaner

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

1.1. Product identifier

| | |
|---------------------------------|--|
| Product name | Redex Diesel System Cleaner |
| Product number | RADD0011B, RADD2701B, RADD0027A, RADD0019A, RADD0057A, RADD0007A, RADD0015A, RADD1201A, RADD1601A, RADD1901A, RADD2201A, RADD2701A, RADD0011A, RADD0071A |
| Internal identification | NQA2301 |
| UFI | UFI: HJC6-G0UR-H008-G502 |
| REACH registration notes | This is a MIXTURE; no registration information contained in this document . Holts are classed as Downstream User. |

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

| | |
|------------------------|----------------|
| Identified uses | Fuel additive. |
|------------------------|----------------|

1.3. Details of the supplier of the safety data sheet

| | |
|-----------------------|---|
| Supplier | Holt Lloyd Services 52 Rue des 40 Mines, 60000 – Allonne, France Phone: +33 (0)3 64 99 00 32 info@holtsauto.com |
| Contact person | Contact email address: info@holtsauto.com |
| Manufacturer | Holt Lloyd International Ltd Barton Dock Road Stretford Manchester M32 0YQ - England, UK +44 (0) 161 866 4800 FAX +44 (0) 161 866 4854 www.holtsauto.com |

1.4. Emergency telephone number

| | |
|----------------------------|--|
| Emergency telephone | UK - 00 44 (0) 161 866 4800 Office hrs = 0900 - 1700 hrs |
|----------------------------|--|

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National emergency telephone number +43 1 31304 5620; chemikalien@umweltbundesamt.at (Austria)
 +32022649636; info@poisoncentre.be (Belgium)
 +359 2 9154 409; poison_centre@mail.orbitel.bg (Bulgaria)
 +38514686910; toksikologija@hzjz.hr (Croatia)
 +35722405611; cy-chemregistry@dli.mlsi.gov.cy (Cyprus)
 +420267082257; biocidy@mzcr.cz (Czech Republic)
 +45 72 54 40 00; mst@mst.dk (Denmark)
 +372 794 3500; clp@terviseamet.ee, info@terviseamet.ee (Estonia)
 +358 5052 000; kirjaamo@tukes.fi (Finland)
 + 33 3 83 85 21 92; bnpc@chru-nancy.fr (France)
 +49-30-18412-0; bfr@bfr.bund.de (Germany)
 +302106479250; +302106479450; devxp.gcs@aade.gr, environment.gcs@aade.gr (Greece)
 +36 (1) 476 1135; clp.ca@nnk.gov.hu (Hungary)
 +354 543 22 22; eitur@landspitali.is (Iceland)
 +353 (1) 809 2166 / +353 (1) 809 2566; chemicalsinfo@beaumont.ie (Ireland)
 +390649906140; inscweb@iss.it (Italy)
 +371 67032600; lvgmc@lvgmc.lv (Latvia)
 +370 70662008; aaa@aaa.am.lt (Lithuania)
 +320 22649636; +352 24785551; info@poisoncentre.be; direction-sante@ms.etat.lu (Luxembourg)
 +356 2395 2000; info@mccaa.org.mt (Malta)
 +31 88 75 585 61; productnotificatie@umcutrecht.nl (The Netherlands)
 +4573580500; produktregisteret@miljodir.no / +47 21 07 70 00; folkehelseinstituttet@fhi.no (Norway)
 +48 42 2538 400; biuro@chemikalia.gov.pl (Poland)
 +351213303271; ciav.tox@inem.pt (Portugal)
 +40213183606; infotox@insp.gov.ro (Romania)
 +7 495 621 6885; +7 495 628 1687; rtiac@mail.ru; rtiac2003@yahoo.com (Russia)
 +421 2 5465 2307; ntic@ntic.sk (Slovakia)
 + 386 1 522 1293; gp.ukc@kclj.si (Slovenia)
 +34 917689800; intcf.doc@justicia.es (Spain)
 +46104566750; giftinformation@gic.se (Sweden)
 +44 121 507 4123; allistervale@npis.org, sallybradberry@npis.org (UK)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

| | |
|------------------------------|-------------------------------------|
| Physical hazards | Flam. Liq. 3 - H226 |
| Health hazards | STOT SE 3 - H336 Asp. Tox. 1 - H304 |
| Environmental hazards | Aquatic Chronic 3 - H412 |

2.2. Label elements

Hazard pictograms



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.
 H336 May cause drowsiness or dizziness.
 H304 May be fatal if swallowed and enters airways.
 H412 Harmful to aquatic life with long lasting effects.

Redex Diesel System Cleaner

| | |
|---|--|
| Precautionary statements | <p>P101 If medical advice is needed, have product container or label at hand.</p> <p>P102 Keep out of reach of children.</p> <p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P273 Avoid release to the environment.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p> |
| Supplemental label information | EUH066 Repeated exposure may cause skin dryness or cracking. |
| UFI | UFI: HJC6-G0UR-H008-G502 |
| Contains | Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics, Hydrocarbons, C10, aromatics, >1% naphthalene |
| Supplementary precautionary statements | <p>P261 Avoid breathing vapour/ spray.</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P331 Do NOT induce vomiting.</p> <p>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> |

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

| | |
|---|----------------------|
| Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics | 60-100% |
| CAS number: 64742-48-9 | EC number: 919-857-5 |
| REACH registration number: 01-2119463258-33-XXXX | |
| Classification | |
| Flam. Liq. 3 - H226 | |
| STOT SE 3 - H336 | |
| Asp. Tox. 1 - H304 | |
| Hydrocarbons, C10, aromatics, >1% naphthalene | 1-5% |
| CAS number: 1189173-42-9 | EC number: 919-284-0 |
| REACH registration number: 01-2119463588-24-XXXX | |
| Classification | |
| STOT SE 3 - H336 | |
| Asp. Tox. 1 - H304 | |
| Aquatic Chronic 2 - H411 | |

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| | | |
|-------------------------------|------------------------|--|
| NAPHTHALENE | | <1% |
| CAS number: 91-20-3 | EC number: 202-049-5 | REACH registration number: 01-2119561346-37-XXXX |
| M factor (Acute) = 1 | M factor (Chronic) = 1 | |
| Classification | | |
| Acute Tox. 4 - H302 | | |
| Carc. 2 - H351 | | |
| Aquatic Acute 1 - H400 | | |
| Aquatic Chronic 1 - H410 | | |
| 1,2,4-TRIMETHYLBENZENE | | <1% |
| CAS number: 95-63-6 | EC number: 202-436-9 | REACH registration number: 01-2119472135-42-XXXX |
| Classification | | |
| Flam. Liq. 3 - H226 | | |
| Acute Tox. 4 - H332 | | |
| Skin Irrit. 2 - H315 | | |
| Eye Irrit. 2 - H319 | | |
| STOT SE 3 - H335 | | |
| Aquatic Chronic 2 - H411 | | |

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|----------------------------|---|
| General information | Treat symptomatically. |
| Inhalation | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention immediately. Place unconscious person on their side in the recovery position and ensure breathing can take place. Do not induce vomiting. Symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Show this Safety Data Sheet to the medical personnel. |
| Ingestion | Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. |
| Skin contact | Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing. |
| Eye contact | Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention if any discomfort continues. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|----------------------------|---|
| General information | The severity of the symptoms described will vary dependent on the concentration and the length of exposure. |
| Inhalation | Vapours may cause headache, fatigue, dizziness and nausea. |
| Ingestion | May cause discomfort if swallowed. |

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Skin contact May be slightly irritating to skin. Prolonged skin contact may cause redness and irritation.

Eye contact May be slightly irritating to eyes. Prolonged contact may cause redness and/or tearing.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards In case of fire, toxic and corrosive gases may be formed. No unusual fire or explosion hazards noted.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen. Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid release to the environment. Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid breathing vapours. Avoid contact with skin and eyes.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash contaminated skin thoroughly after handling. Use appropriate skin cream to prevent drying of skin.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep only in the original container. Keep away from food, drink and animal feeding stuffs. Store in a cool and well-ventilated place.

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Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Advisory OEL. CEFIC-HSPA : 1200 mg/m³

Hydrocarbons, C10, aromatics, >1% naphthalene

Long-term exposure limit (8-hour TWA): PT 500 ppm

Short-term exposure limit (15-minute): PT ppm 2000 mg/m³

NAPHTHALENE

Long-term exposure limit (8-hour TWA): WEL 10 ppm 53 mg/m³

Short-term exposure limit (15-minute): WEL 15 ppm 80 mg/m³

1,2,4-TRIMETHYLBENZENE

Long-term exposure limit (8-hour TWA): 25 ppm 125

WEL = Workplace Exposure Limit.

DNEL See ingredient-specific DNELs listed below.

PNEC See ingredient-specific PNECs listed below.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (CAS: 64742-48-9)

DNEL Industry - Dermal; Long term : 208 mg/kg/day
 Industry - Inhalation; Long term : 871 mg/m³
 Consumer - Dermal; Long term : 125 mg/kg/day
 Consumer - Inhalation; Long term : 185 mg/m³
 Consumer - Oral; Long term : 125 mg/l

Hydrocarbons, C10, aromatics, >1% naphthalene (CAS: 1189173-42-9)

DNEL Workers - Inhalation; Long term systemic effects: 151 mg/m³
 Workers - Dermal; Long term systemic effects: 12.5 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 32 mg/m³
 General population - Dermal; Long term systemic effects: 7.5 mg/kg bw/day
 General population - Oral; Long term systemic effects: 7.5 mg/kg bw/day

NAPHTHALENE (CAS: 91-20-3)

DNEL Workers - Inhalation; Long term systemic effects: 25 mg/m³
 Workers - Inhalation; Long term local effects: 25 mg/m³
 Workers - Dermal; Long term systemic effects: 3.57 mg/kg bw/day

PNEC Fresh water; Long term 2.4 µg/l
 marine water; Long term 2.4 µg/l
 STP; Long term 2.9 mg/l
 Sediment (Freshwater); Long term 67.2 µg/kg sediment dw
 Sediment (Marinewater); Long term 67.2 µg/kg sediment dw
 Soil; Long term 53.3 µg/kg soil dw

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1,2,4-TRIMETHYLBENZENE (CAS: 95-63-6)

| | |
|--|--|
| DNEL | Workers - Inhalation; Long term systemic effects: 100 mg/m ³ |
| | Workers - Inhalation; Short term systemic effects: 100 mg/m ³ |
| | Workers - Inhalation; Long term local effects: 100 mg/m ³ |
| | Workers - Dermal; Long term systemic effects: 16171 mg/kg bw/day |
| | General population - Inhalation; Long term systemic effects: 29.4 mg/m ³ |
| | General population - Inhalation; Short term systemic effects: 29.4 mg/m ³ |
| | General population - Inhalation; Long term local effects: 29.4 mg/m ³ |
| | General population - Inhalation; Short term local effects: 29.4 mg/m ³ |
| | General population - Dermal; Long term systemic effects: 9512 mg/kg bw/day |
| General population - Oral; Long term systemic effects: 15 mg/kg bw/day | |
| PNEC | Fresh water; 0.12 mg/l |
| | marine water; 0.12 mg/l |
| | STP; 2.41 mg/l |
| | Sediment (Freshwater); 13.56 mg/kg sediment dry weight |
| | Soil; 2.34 mg/kg soil dry weight |

Phenol, dodecyl-, branched (CAS: 210555-94-5)

| | |
|---|---|
| DNEL | Workers - Inhalation; Long term systemic effects: 1.762 mg/m ³ |
| | Workers - Inhalation; Short term systemic effects: 44.18 mg/m ³ |
| | Workers - Dermal; Long term systemic effects: 0.25 mg/kg bw/day |
| | Workers - Dermal; Short term systemic effects: 166 mg/kg bw/day |
| | General population - Inhalation; Long term systemic effects: 0.79 mg/m ³ |
| | General population - Inhalation; Short term systemic effects: 13.26 mg/m ³ |
| | General population - Dermal; Long term systemic effects: 0.075 mg/kg bw/day |
| | General population - Dermal; Short term systemic effects: 50 mg/kg bw/day |
| | General population - Oral; Long term systemic effects: 0.075 mg/kg bw/day |
| General population - Oral; Short term systemic effects: 1.26 mg/kg bw/day | |
| PNEC | Fresh water; 0.074 µg/l |
| | Intermittent release; 0.37 µg/l |
| | marine water; 0.007 µg/l |
| | STP; 100 mg/l |
| | Sediment (Freshwater); 0.226 mg/kg/day, mg/kg sediment dry weight |
| | Sediment (Marinewater); 0.027 mg/kg sediment dry weight |
| Soil; 0.118 mg/kg soil dry weight | |

Ethylenediamine (CAS: 107-15-3)

| | |
|-------------|---|
| DNEL | Workers - Inhalation; Long term systemic effects: 25 mg/m ³ |
| | Workers - Dermal; Long term systemic effects: 3.6 mg/kg bw/day |
| | General population - Inhalation; Long term systemic effects: 12.5 mg/m ³ |
| | General population - Oral; Long term systemic effects: 0.275 mg/kg bw/day |
| PNEC | Fresh water; 0.016 mg/l |
| | marine water; 0.002 mg/l |
| | STP; 0.5 mg/l |
| | Sediment (Freshwater); 7.68 mg/kg sediment dry weight |
| | Sediment (Marinewater); 0.768 mg/kg sediment dry weight |
| | Soil; 4.36 mg/kg soil dry weight |

NON HAZARDOUS INGREDIENTS

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Ingredient comments

WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

No specific ventilation requirements.

Eye/face protection

Wear chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Good personal hygiene procedures should be implemented.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn.

Environmental exposure controls

Avoid release to the environment. Contain spillages.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Appearance | Coloured liquid. |
| Colour | Black. |
| Odour | Aromatic hydrocarbons. |
| Initial boiling point and range | 130°C @ 760 mm Hg |
| Flash point | ~ 37 - 38°C Closed cup. |
| Upper/lower flammability or explosive limits | Lower flammable/explosive limit: 0.6 % Upper flammable/explosive limit: 7 % |
| Vapour pressure | 300 - 600 Pa @ 20°C |
| Relative density | 0.77 @ 20°C |
| Solubility(ies) | Immiscible with water. |
| Viscosity | Kinematic viscosity ≤ 20.5 mm ² /s. |

9.2. Other information

| | |
|---------------------------|--|
| Volatile organic compound | This product contains a maximum VOC content of 98 %. |
|---------------------------|--|

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability

Stable under the prescribed storage conditions.

Redex Diesel System Cleaner

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not applicable. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid heat. Avoid freezing.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Information given is based on data of the components and of similar products.

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo

Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Central and/or peripheral nervous system damage. May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

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Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

Toxicological information on ingredients.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Notes (oral LD₅₀) LD₅₀ > 5000 mg/kg, Oral, Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species Rat

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

Species Rat

Notes (inhalation LC₅₀) LC50 > 5000 mg/m³, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEL >= 3000 mg/kg bw/day, Oral, Rat P

Reproductive toxicity - development Developmental toxicity: - NOAEC: >= 300 ppm, Inhalation, Rat

Specific target organ toxicity - single exposure

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STOT - single exposure Central and/or peripheral nervous system damage.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

NAPHTHALENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 490.0

Species Rat

ATE oral (mg/kg) 490.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 340,000.0

Species Rat

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Negative with metabolic activation. Negative without metabolic activation.

Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity Suspected of causing cancer.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development No evidence of reproductive toxicity in animal studies.

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Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

1,2,4-TRIMETHYLBENZENE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 6000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 3440 mg/kg, Dermal, Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Harmful if inhaled. LC50 10200 mg/m³, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No adverse effects observed (not sensitising)

Germ cell mutagenicity

Genotoxicity - in vitro No adverse effects observed (negative)

Genotoxicity - in vivo No adverse effects observed (negative)

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Three-generation study - NOAEC 2500 mg/m³, Inhalation, Rat reproductive toxicity
No evidence of reproductive toxicity in animal studies.

Reproductive toxicity - development Developmental toxicity:, Maternal toxicity: - NOAEC: 1470 mg/m³, Inhalation, Rat
No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Conclusive data but not sufficient for classification.

Aspiration hazard

Aspiration hazard Not relevant.

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Phenol, dodecyl-, branched

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 2100 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ ca. 15000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Negative with metabolic activation. Negative without metabolic activation.

Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility May damage fertility.

Reproductive toxicity - development Repr. 1B

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

Ethylenediamine

Acute toxicity - oral

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0

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SECTION 12: Ecological information

Ecotoxicity Product classification: Harmful to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity There is no data on the product itself, see ingredient-specific data below.

Ecological information on ingredients.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Acute aquatic toxicity

| | |
|---|---|
| Acute toxicity - fish | LC ₅₀ , 96 hours: > 1000 mg/l, Oncorhynchus mykiss (Rainbow trout) |
| Acute toxicity - aquatic invertebrates | EC ₅₀ , 48 hours: > 1000 mg/l, Daphnia magna |
| Acute toxicity - aquatic plants | IC ₅₀ , 72 hours: > 1000 mg/l, Pseudokirchneriella subcapitata |
| Acute toxicity - microorganisms | EL50, 48 hours: 0.95 mg/l, Tetrahymena pyriformis, QSAR |

NAPHTHALENE

Acute aquatic toxicity

| | |
|---|--|
| LE(C)₅₀ | 0.1 < L(E)C ₅₀ ≤ 1 |
| M factor (Acute) | 1 |
| Acute toxicity - fish | LC ₅₀ , 96 hours: 1.6 mg/l, Oncorhynchus mykiss (Rainbow trout) |
| Acute toxicity - aquatic invertebrates | EC ₅₀ , 48 hours: 1.96 mg/l, Daphnia magna LC ₅₀ , 48 hours: 2350 µg/l, Marinewater invertebrates, Palaemonetes pugio |
| Acute toxicity - aquatic plants | EC ₅₀ , 4 hours: 2.96 mg/l, Selenastrum capricornutum |
| Acute toxicity - microorganisms | IC ₅₀ , 15 hours: 29 mg/l, Nitrosomonas sp. NOEC, 15 hours: 10 mg/l, Nitrosomonas sp. |

Chronic aquatic toxicity

| | |
|---|--|
| M factor (Chronic) | 1 |
| Chronic toxicity - fish early life stage | NOEC, 40 days: 0.12 mg/l, Oncorhynchus kisutch (Coho salmon) |
| Chronic toxicity - aquatic invertebrates | NOEC, 125 days: 0.6 mg/l, Daphnia Pulex |

1,2,4-TRIMETHYLBENZENE

Acute aquatic toxicity

| | |
|---|---|
| Acute toxicity - fish | LC ₅₀ , 96 hours: 7.72 mg/l, Pimephales promelas (Fat-head Minnow) |
| Acute toxicity - aquatic invertebrates | EC ₅₀ , 48 hours: 3.6 mg/l, Daphnia magna |
| Acute toxicity - aquatic plants | IC ₅₀ , 72 hours: 7.72 mg/l, Algae EC ₅₀ , 96 hours: 2.356 mg/l, Green algae, QSAR |

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Acute toxicity - microorganisms Inhibition of total respiration, 3 hours: 500 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - fish early life stage ChV, 30 days: 0.396 mg/l, QSAR

Chronic toxicity - aquatic invertebrates ChV, 16 days: 0.367 mg/l, Daphnia magna, QSAR

Phenol, dodecyl-, branched

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 40 mg/l, Pimephales promelas (Fat-head Minnow)
NOEC, 96 hours: 25 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.037 mg/l, Daphnia magna, Freshwater invertebrates
LC₅₀, 96 hours: 0.58 mg/l, Mysid shrimp, Americamysis bahia, Marinewater invertebrates
NOEC, 48 hours: 0.011 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 0.36 mg/l, Scenedesmus subspicatus
NOEC, 72 hours: 0.07 mg/l, Scenedesmus subspicatus

Acute toxicity - microorganisms EC₅₀, 3 hours: 1000 mg/l, Activated sludge
EC₅₀, 3 hours: 1000 mg/l, Activated sludge

Chronic aquatic toxicity

M factor (Chronic) 1

Chronic toxicity - fish early life stage Not available.

Short term toxicity - embryo and sac fry stages Not available.

Chronic toxicity - aquatic invertebrates EC₁₀, LC₁₀, NOEC, 21 days: 0.004 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product is biodegradable.

Ecological information on ingredients.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Persistence and degradability Rapidly degradable

NAPHTHALENE

Persistence and degradability Rapidly degradable

1,2,4-TRIMETHYLBENZENE

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Persistence and degradability Not expected to be readily biodegradable. Inherently biodegradable

Phenol, dodecyl-, branched

Persistence and degradability Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

Ecological information on ingredients.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

NAPHTHALENE

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.3 - 3.7

1,2,4-TRIMETHYLBENZENE

Bioaccumulative potential BCF: 243, Pimephales promelas (Fat-head Minnow), QSAR

Partition coefficient log Kow: 3.63

Phenol, dodecyl-, branched

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 7.14

12.4. Mobility in soil

Mobility The product contains substances which are insoluble in water and which may spread on water surfaces.

Ecological information on ingredients.

NAPHTHALENE

Adsorption/desorption coefficient Koc 378 @ 20 deg C

1,2,4-TRIMETHYLBENZENE

Adsorption/desorption coefficient calculated - Log Koc: 3.04 @ °C calculated - Koc: 1097 @ °C

Phenol, dodecyl-, branched

Adsorption/desorption coefficient Log Koc 4.4 - 4.67 Highly insoluble in water.

12.5. Results of PBT and vPvB assessment

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Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

NAPHTHALENE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

1,2,4-TRIMETHYLBENZENE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

| | |
|-------------------------|------|
| UN No. (ADR/RID) | 1993 |
| UN No. (IMDG) | 1993 |
| UN No. (ICAO) | 1993 |
| UN No. (ADN) | 1993 |

14.2. UN proper shipping name

| | |
|---------------------------------------|---|
| Proper shipping name (ADR/RID) | FLAMMABLE LIQUID, N.O.S. (CONTAINS Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics, 1,2,4-TRIMETHYLBENZENE) |
| Proper shipping name (IMDG) | FLAMMABLE LIQUID, N.O.S. (CONTAINS Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics, 1,2,4-TRIMETHYLBENZENE) |
| Proper shipping name (ICAO) | FLAMMABLE LIQUID, N.O.S. (CONTAINS Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics, 1,2,4-TRIMETHYLBENZENE) |
| Proper shipping name (ADN) | FLAMMABLE LIQUID, N.O.S. (CONTAINS Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics, 1,2,4-TRIMETHYLBENZENE) |

14.3. Transport hazard class(es)

| | |
|------------------------------------|----|
| ADR/RID class | 3 |
| ADR/RID classification code | F1 |
| ADR/RID label | 3 |

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| | |
|---------------------|---|
| IMDG class | 3 |
| ICAO class/division | 3 |
| ADN class | 3 |

Transport labels



14.4. Packing group

| | |
|-----------------------|-----|
| ADR/RID packing group | III |
| IMDG packing group | III |
| ICAO packing group | III |
| ADN packing group | III |

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

| | |
|--|----------|
| EmS | F-E, S-E |
| ADR transport category | 3 |
| Emergency Action Code | •3Y |
| Hazard Identification Number (ADR/RID) | 30 |
| Tunnel restriction code | (D/E) |

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

| | |
|--|--|
| National regulations | The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). |
| EU legislation | Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015. |
| Authorisations (Annex XIV Regulation 1907/2006) | No specific authorisations are known for this product. |
| Restrictions (Annex XVII Regulation 1907/2006) | No specific restrictions on use are known for this product. |

Redex Diesel System Cleaner

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

| | |
|---|--|
| Abbreviations and acronyms used in the safety data sheet | <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>CAS: Chemical Abstracts Service.</p> <p>DNEL: Derived No Effect Level.</p> <p>EC₅₀: 50% of maximal Effective Concentration.</p> <p>GHS: Globally Harmonized System.</p> <p>IARC: International Agency for Research on Cancer.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>Kow: Octanol-water partition coefficient.</p> <p>LC₅₀: Lethal Concentration to 50 % of a test population.</p> <p>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>NOAEC: No Observed Adverse Effect Concentration.</p> <p>NOAEL: No Observed Adverse Effect Level.</p> <p>NOEC: No Observed Effect Concentration.</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>PNEC: Predicted No Effect Concentration.</p> <p>REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>SVHC: Substances of Very High Concern.</p> <p>UVCB - Unknown or variable composition, complex reaction products or Biological materials.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p> |
| Classification procedures according to Regulation (EC) 1272/2008 | <p>Flam. Liq. 3 - H226: On basis of test data. STOT SE 3 - H336: Calculation method. Asp. Tox. 1 - H304: Calculation method. Aquatic Chronic 3 - H412: Calculation method.</p> |
| Training advice | <p>Chemical hazard awareness training, including labelling, Safety Data Sheets, Personal Protective Equipment (PPE) and hygiene as relevant for the target audience.</p> |
| Issued by | <p>Regulatory Specialist</p> |
| Revision date | <p>18/08/2021</p> |
| Revision | <p>4</p> |
| Supersedes date | <p>05/01/2021</p> |
| SDS number | <p>21095</p> |

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Hazard statements in full

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.