



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.
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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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Redex Diesel System Cleaner

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)
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 +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.

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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: —	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		
Phenol, dodecyl-, branched <1%		
CAS number: 210555-94-5	EC number: 310-154-3	REACH registration number: 01-2119513207-49-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification Skin Corr. 1 - H314 Eye Dam. 1 - H318 Repr. 1B - H360F Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		
MALEIC ANHYDRIDE <1%		
CAS number: 108-31-6	EC number: 203-571-6	REACH registration number: 01-2119472428-31-XXXX
Classification Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Resp. Sens. 1 - H334 Skin Sens. 1A - H317 STOT RE 1 - H372		

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

SECTION 4: First aid measures

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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.
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.
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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

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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.

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

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

MALEIC ANHYDRIDE

Long-term exposure limit (8-hour TWA): WEL 1 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 3 mg/m³(Sen)

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)

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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

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

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

DNEL Workers - Inhalation; Long term systemic effects: 100 mg/m³
 Workers - Inhalation; Short term systemic effects: 100 mg/m³
 Workers - Inhalation; Long term local effects: 100 mg/m³
 Workers - Dermal; Long term systemic effects: 16171 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 29.4 mg/m³
 General population - Inhalation; Short term systemic effects: 29.4 mg/m³
 General population - Inhalation; Long term local effects: 29.4 mg/m³
 General population - Inhalation; Short term local effects: 29.4 mg/m³
 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/m³
 Workers - Inhalation; Short term systemic effects: 44.18 mg/m³
 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/m³
 General population - Inhalation; Short term systemic effects: 13.26 mg/m³
 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

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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
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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

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.

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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.

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

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Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
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.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Central and/or peripheral nervous system damage. May cause drowsiness or dizziness.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	May be fatal if swallowed and enters airways.
<u>Toxicological information on ingredients.</u>	

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.

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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.

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

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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.

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.

1,2,4-TRIMETHYLBENZENE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 7.72 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 3.6 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: 7.72 mg/l, Algae
EC₅₀, 96 hours: 2.356 mg/l, Green algae, QSAR

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

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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.

1,2,4-TRIMETHYLBENZENE

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.

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.

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.

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
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



Redex Diesel System Cleaner

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.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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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>
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Redex Diesel System Cleaner

Hazard statements in full

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H360F May damage fertility.
H372 Causes damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.
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.
H413 May cause long lasting harmful effects to aquatic life.

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.