MAUMO INTERNATIONAL
ROAD TO PERFECTION

# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

amended by 2020/878/EU

# 5in1 Diesel Injection Cleaner

Version number: 2.0
Replaces version of: 09.09.2022 (1)

Revision: 05.03.2024

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

### 1.1 Product identifier

| | |
|---|---|
| Trade name | **5in1 Diesel Injection Cleaner** |
| Registration number (REACH) | not relevant (mixture) |
| Unique formula identifier (UFI) | 76NC-EYAH-A10D-F6P8 |
| Product number | 687002 |

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

Relevant identified uses

Additive
Professional use
Consumer uses

### 1.3 Details of the supplier of the safety data sheet

Maumo International BV
Kaartenmakerstraat 4
2984 CB Ridderkerk
Netherlands

Telephone: +31 (0)180 699 234
e-mail: info@maumo.nl
Website: www.maumo.nl

### 1.4 Emergency telephone number

Emergency information service

+31 (0)180 699 234
This number is only available during the following office hours: Mon-Fri 09:00 - 17:00

Poison centre

| Country | Name | Telephone |
|---|---|---|
| Netherlands | Nationaal Vergiftigingen Informatie Centrum (UMC Utrecht) Uitsluitend bestemd om professionele hulpverleners te informeren bij acute vergiftigingen | +31 88 755 8000 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

| Section | Hazard class | Category | Hazard class and category | Hazard statement |
|---|---|---|---|---|
| 3.10 | aspiration hazard | 1 | Asp. Tox. 1 | H304 |
| 4.1C | hazardous to the aquatic environment - chronic hazard | 3 | Aquatic Chronic 3 | H412 |

For full text of H-phrases: see SECTION 16

| Code | Supplemental hazard information |
|---|---|
| EUH044 | risk of explosion if heated under confinement |
| EUH066 | repeated exposure may cause skin dryness or cracking |

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

## 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- signal word: Danger

- pictograms

GHS08



- hazard statements

| | |
|---|---|
| H304 | May be fatal if swallowed and enters airways. |
| H412 | Harmful to aquatic life with long lasting effects. |

- precautionary statements

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P273 | Avoid release to the environment. |
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor. |
| P331 | Do NOT induce vomiting. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

- supplemental hazard information

| | |
|---|---|
| EUH044 | Risk of explosion if heated under confinement. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

Child-resistant fastening: yes

Tactile warning of danger: yes

- hazardous ingredients for labelling

Contains: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics.

## 2.3 Other hazards

This material is combustible, but will not ignite readily.

### Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

# SECTION 3: Composition/information on ingredients

## 3.1 Substances

Not relevant (mixture).

## 3.2 Mixtures

The product does not contain (other) ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|---|---|---|---|---|---|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | EC No 918-481-9<br><br>REACH Reg. No 01-2119457273-39-xxxx | 80 – 95 | Asp. Tox. 1 / H304<br>EUH066 |  | |

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|---|---|---|---|---|---|
| 2-Ethylhexyl nitrate | CAS No<br>27247-96-7<br><br>EC No<br>248-363-6<br><br>REACH Reg. No<br>01-2119539586-27-xxxx | 5 – 10 | Acute Tox. 4 / H302<br>Acute Tox. 4 / H312<br>Acute Tox. 4 / H332<br>Aquatic Chronic 2 / H411<br>EUH044<br>EUH066 |  | |
| 2-Ethyl-1-hexanol | CAS No<br>104-76-7<br><br>EC No<br>203-234-3<br><br>REACH Reg. No<br>01-2119487289-20-xxxx | < 1 | Acute Tox. 4 / H332<br>Skin Irrit. 2 / H315<br>Eye Irrit. 2 / H319<br>STOT SE 3 / H335 |  | IOELV |

Notes
IOELV: Substance with a community indicative occupational exposure limit value

| Name of substance | Identifier | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|---|---|---|---|---|---|
| 2-Ethylhexyl nitrate | CAS No<br>27247-96-7<br><br>EC No<br>248-363-6 | - | - | 500 $^{mg}/_{kg}$<br>1.100 $^{mg}/_{kg}$<br>11 $^{mg}/_{l}$/4h | oral<br>dermal<br>inhalation: vapour |
| 2-Ethyl-1-hexanol | CAS No<br>104-76-7<br><br>EC No<br>203-234-3 | - | - | >11 $^{mg}/_{l}$/4h | inhalation: vapour |

### Remarks

All the percentages given are percentages by weight unless stated otherwise. For full text of H-phrases: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

#### Following skin contact

Wash with plenty of soap and water. Do NOT use solvents or thinners. If skin irritation or rash occurs: Get medical advice/attention.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion

Immediately call a POISON CENTER/doctor. Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. In case of vomiting keep the head low so that stomach contents cannot enter the lungs. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

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

Headache. Methemoglobinemia. Aspiration hazard.

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

For specialist advice physicians should contact the poison centre.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water spray; Alcohol resistant foam; Dry extinguishing powder; Carbon dioxide (CO2);
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

### 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

During fire hazardous fumes/smoke could be produced. Carbon monoxide (CO). Carbon dioxide (CO2).

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Keep containers cool with water spray. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Self-contained breathing apparatus (EN 133). Standard protective clothing for firefighters.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Absorb with liquid-binding material (sand, diatomite, diatomaceous earth, acid binder, universal binder, sawdust). Clean with cleaning agents, do not use solvents.

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

- incompatible substances or mixtures

Keep away from alkalis, oxidising substances, acids, reducing agents.

Control of effects

Protect against external exposure, such as

High temperatures. UV-radiation/sunlight.

Consideration of other advice

Store in a cool, dry and ventilated place. Store in a closed container.

- packaging compatibilities

Keep only in original container.

### 7.3 Specific end use(s)

There is no additional information.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**National limit values**

Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Notation | Source |
|---|---|---|---|---|---|---|---|---|---|
| EU | 2-ethylhexan-1-ol | 104-76-7 | IOELV | 1 | 5,4 | | | | 2017/164/EU |
| NL | 2-ethylhexan-1-ol | 104-76-7 | GW | 1 | 5,4 | | | | SC-SZW |

Notation
STEL — short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

Notation

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

### Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|---|---|---|---|---|---|---|
| 2-Ethylhexyl nitrate | 27247-96-7 | DNEL | 0,35 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| 2-Ethylhexyl nitrate | 27247-96-7 | DNEL | 1 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| 2-Ethylhexyl nitrate | 27247-96-7 | DNEL | 44 µg/cm² | human, dermal | worker (industry) | chronic - local effects |
| 2-Ethylhexyl nitrate | 27247-96-7 | DNEL | 87 µg/m³ | human, inhalatory | consumer (private households) | chronic - systemic effects |
| 2-Ethylhexyl nitrate | 27247-96-7 | DNEL | 0,52 mg/kg bw/day | human, dermal | consumer (private households) | chronic - systemic effects |
| 2-Ethylhexyl nitrate | 27247-96-7 | DNEL | 22 µg/cm² | human, dermal | consumer (private households) | chronic - local effects |
| 2-Ethylhexyl nitrate | 27247-96-7 | DNEL | 25 µg/kg | human, oral | consumer (private households) | chronic - systemic effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 12,8 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 53,2 mg/m³ | human, inhalatory | worker (industry) | chronic - local effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 53,2 mg/m³ | human, inhalatory | worker (industry) | acute - local effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 23 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 2,3 mg/m³ | human, inhalatory | consumer (private households) | chronic - systemic effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 26,6 mg/m³ | human, inhalatory | consumer (private households) | chronic - local effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 26,6 mg/m³ | human, inhalatory | consumer (private households) | acute - local effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 11,4 mg/kg bw/day | human, dermal | consumer (private households) | chronic - systemic effects |
| 2-Ethyl-1-hexanol | 104-76-7 | DNEL | 1,1 mg/kg bw/day | human, oral | consumer (private households) | chronic - systemic effects |

Relevant PNECs of components

| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
|---|---|---|---|---|---|---|
| 2-Ethylhexyl nitrate | 27247-96-7 | PNEC | 0,08 µg/l | aquatic organisms | marine water | short-term (single instance) |
| 2-Ethylhexyl nitrate | 27247-96-7 | PNEC | 0,83 µg/l | aquatic organisms | freshwater | short-term (single instance) |

Relevant PNECs of components

| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
|---|---|---|---|---|---|---|
| 2-Ethylhexyl nitrate | 27247-96-7 | PNEC | 10 $^{mg}/_{l}$ | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| 2-Ethylhexyl nitrate | 27247-96-7 | PNEC | 0,47 $^{mg}/_{kg}$ | aquatic organisms | freshwater sediment | short-term (single instance) |
| 2-Ethylhexyl nitrate | 27247-96-7 | PNEC | 47 $^{µg}/_{kg}$ | aquatic organisms | marine sediment | short-term (single instance) |
| 2-Ethylhexyl nitrate | 27247-96-7 | PNEC | 93,5 $^{µg}/_{kg}$ | terrestrial organisms | soil | short-term (single instance) |
| 2-Ethyl-1-hexanol | 104-76-7 | PNEC | 0,017 $^{mg}/_{l}$ | aquatic organisms | freshwater | short-term (single instance) |
| 2-Ethyl-1-hexanol | 104-76-7 | PNEC | 0,002 $^{mg}/_{l}$ | aquatic organisms | marine water | short-term (single instance) |
| 2-Ethyl-1-hexanol | 104-76-7 | PNEC | 10 $^{mg}/_{l}$ | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| 2-Ethyl-1-hexanol | 104-76-7 | PNEC | 0,284 $^{mg}/_{kg}$ | aquatic organisms | freshwater sediment | short-term (single instance) |
| 2-Ethyl-1-hexanol | 104-76-7 | PNEC | 0,028 $^{mg}/_{kg}$ | aquatic organisms | marine sediment | short-term (single instance) |
| 2-Ethyl-1-hexanol | 104-76-7 | PNEC | 0,047 $^{mg}/_{kg}$ | terrestrial organisms | soil | short-term (single instance) |

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation. Provide eyewash stations and safety showers at the workplace.

### Individual protection measures (personal protective equipment)

### Eye/face protection



Use safety goggle with side protection (EN 166).

### Skin protection



Protective clothing (EN 340 & EN ISO 13688).

### Hand protection



Wear suitable gloves. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Chemical protection gloves are suitable, which are tested according to EN 374. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- type of material

Nitrile rubber

- material thickness

Use gloves with a minimum material thickness: ≥ 0,38 mm.

- breakthrough time of the glove material

Use gloves with a minimum breakthrough time of the glove material: >240 minutes (permeation: level 5).

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Full face mask/half mask/quarter mask (EN 136/140). Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | liquid |
| Colour | yellow |
| Odour | characteristic |
| Melting point/freezing point | -54 °C at 1 atm calculated value, referring to a component of the mixture |
| Boiling point or initial boiling point and boiling range | 160 – 245 °C |
| Flammability | this material is combustible, but will not ignite readily |
| Lower and upper explosion limit | LEL: 0,6 vol% / UEL: 7 vol% |
| Flash point | >61 °C |
| Auto-ignition temperature | >200 °C (auto-ignition temperature (liquids and gases)) |
| Decomposition temperature | no data available |
| pH (value) | not determined |
| Kinematic viscosity | not determined |
| Solubility | insoluble in water |

| | |
|---|---|
| Partition coefficient n-octanol/water (log value) | this information is not available |

| | |
|---|---|
| Vapour pressure | <0,1 kPa at 20 °C |

Density and/or relative density

| | |
|---|---|
| Density | 0,803 $^{g}/_{cm^3}$ at 20 °C |
| Relative vapour density | information on this property is not available |

| | |
|---|---|
| Particle characteristics | not relevant (liquid) |

### 9.2 Other information

| | |
|---|---|
| Information with regard to physical hazard classes | hazard classes acc. to GHS (physical hazards): not relevant |
| Other safety characteristics | there is no additional information |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

If heated:

Danger of explosion.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

Risk of explosion if heated under confinement.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

Acids, bases, oxidisers, reducing agents.

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Classification according to GHS (1272/2008/EC, CLP)**

Acute toxicity

Shall not be classified as acutely toxic.

| Acute toxicity estimate (ATE) of components | | | |
|---|---|---|---|
| **Name of substance** | **CAS No** | **Exposure route** | **ATE** |
| 2-Ethylhexyl nitrate | 27247-96-7 | oral | 500 $^{mg}/_{kg}$ |
| 2-Ethylhexyl nitrate | 27247-96-7 | dermal | 1.100 $^{mg}/_{kg}$ |
| 2-Ethylhexyl nitrate | 27247-96-7 | inhalation: vapour | 11 $^{mg}/_{l}$/4h |
| 2-Ethyl-1-hexanol | 104-76-7 | inhalation: vapour | >11 $^{mg}/_{l}$/4h |

| Acute toxicity of components | | | | | |
|---|---|---|---|---|---|
| **Name of substance** | **CAS No** | **Exposure route** | **Endpoint** | **Value** | **Species** |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | inhalation: dust/ mist | LC50 | ≥6.100 $^{mg}/_{m^3}$/ 4h | rat |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | oral | LD50 | >5.000 $^{mg}/_{kg}$ | rat |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | dermal | LD50 | >2.000 $^{mg}/_{kg}$ | rat |
| 2-Ethyl-1-hexanol | 104-76-7 | oral | LD50 | 2.047 $^{mg}/_{kg}$ | rat |
| 2-Ethyl-1-hexanol | 104-76-7 | inhalation: vapour | LC50 | >0,89 – ≤5,3 $^{mg}/_{l}$/4h | rat |

### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

May be fatal if swallowed and enters airways.

## 11.2 Information on other hazards

### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

Other information

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|---|---|---|---|---|---|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | LL50 | >1.000 mg/l | fish | 24 h |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | EL50 | >1.000 mg/l | aquatic invertebrates | 24 h |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | NOELR | 32 mg/l | aquatic invertebrates | 96 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | LC50 | 2 mg/l | fish | 96 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | EC50 | 0,83 mg/l | aquatic invertebrates | 48 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | ErC50 | >2,53 mg/l | algae | 72 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | NOEC | 1,52 mg/l | fish | 96 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | LOEC | 2,53 mg/l | algae | 72 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | growth rate (ErCx) 10% | 2,22 mg/l | algae | 72 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | growth (EbCx) 10% | 1,93 mg/l | algae | 72 h |
| 2-Ethyl-1-hexanol | 104-76-7 | LC50 | 17,1 mg/l | fish | 96 h |
| 2-Ethyl-1-hexanol | 104-76-7 | EC50 | 39 mg/l | aquatic invertebrates | 48 h |
| 2-Ethyl-1-hexanol | 104-76-7 | ErC50 | 16,6 mg/l | algae | 72 h |
| 2-Ethyl-1-hexanol | 104-76-7 | NOEC | 14 mg/l | fish | 96 h |
| 2-Ethyl-1-hexanol | 104-76-7 | growth (EbCx) 10% | 3,2 mg/l | algae | 72 h |
| 2-Ethyl-1-hexanol | 104-76-7 | growth rate (ErCx) 10% | 5,3 mg/l | algae | 72 h |

Aquatic toxicity (chronic) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|---|---|---|---|---|---|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | EL50 | >1.000 mg/l | aquatic invertebrates | 24 h |

Aquatic toxicity (chronic) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|---|---|---|---|---|---|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | LL50 | >1.000 mg/l | fish | 24 h |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | NOELR | >10,2 mg/l | aquatic invertebrates | 21 d |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | growth (EbCx) 10% | >1.000 mg/l | microorganisms | 3 h |
| 2-Ethylhexyl nitrate | 27247-96-7 | EC50 | >1.000 mg/l | microorganisms | 3 h |

## 12.2 Persistence and degradability

Degradability of components

| Name of substance | CAS No | Process | Degradation rate | Time | Method |
|---|---|---|---|---|---|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | carbon dioxide generation | 0 % | 3 d | |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | oxygen depletion | 31,3 % | 28 d | |
| 2-Ethylhexyl nitrate | 27247-96-7 | carbon dioxide generation | 0 % | 28 d | |

## 12.3 Bioaccumulative potential

Bioaccumulative potential of components

| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
|---|---|---|---|---|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics | | ≥44,6 – ≤5.362 | ≥3,17 – ≤7,22 | |
| 2-Ethylhexyl nitrate | 27247-96-7 | 1.332 | 5,24 (pH value: 7,1, 40 °C) | |
| 2-Ethyl-1-hexanol | 104-76-7 | | 2,9 (pH value: 7, 25 °C) | |

## 12.4 Mobility in soil

Data are not available.

## 12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

## 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

## 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

| | |
|---|---|
| **14.1 UN number or ID number** | not subject to transport regulations |
| **14.2 UN proper shipping name** | not relevant |
| **14.3 Transport hazard class(es)** | none |
| **14.4 Packing group** | not assigned |
| **14.5 Environmental hazards** | non-environmentally hazardous acc. to the dangerous goods regulations |

### 14.6 Special precautions for user

There is no additional information.

### 14.7 Maritime transport in bulk according to IMO instruments

No data available.

**Additional information for each of the UN Model Regulations**

**Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information**

Not subject to ADR, RID and ADN.

**International Maritime Dangerous Goods Code (IMDG) - additional information**

Not subject to IMDG.

**International Civil Aviation Organization (ICAO-IATA/DGR) - additional information**

Not subject to ICAO-IATA.

## SECTION 15: Regulatory information

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

**Relevant provisions of the European Union (EU)**

**Restrictions according to REACH, Annex XVII**

| Name | Name acc. to inventory | Restriction | No |
|---|---|---|---|
| 5in1 Diesel Injection Cleaner | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | R3 | 3 |
| 2-Ethyl-1-hexanol | substances in tattoo inks and permanent make-up | R75 | 75 |

Legend

R3 1. Shall not be used in:

Legend

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ash-trays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
— can be used as fuel in decorative oil lamps for supply to the general public, and
— present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage”;
(b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: ‘Just a sip of grill lighter fluid may lead to life threatening lung damage’;
(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.’;

Legend

R75 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:
(a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
(i) 0,1 % by weight, if the substance is used solely as a pH regulator;
(ii) 0,01 % by weight, in all other cases;
(e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:
(i) “Rinse-off products”;
(ii) “Not to be used in products applied on mucous membranes”;
(iii) “Not to be used in eye products”;
(g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
(h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry use of a mixture “for tattooing purposes” means injection or introduction of the mixture into a person’s skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
(a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
(b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
(a) the statement “Mixture for use in tattoos or permanent make-up”;
(b) a reference number to uniquely identify the batch;
(c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. “Ingredient” means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;
(d) the additional statement “pH regulator” for substances falling under point (d)(i) of paragraph 1;
(e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
(f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
(g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.
The information shall be clearly visible, easily legible and marked in a way that is indelible.
The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.
Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.
Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.
8. Mixtures that do not contain the statement “Mixture for use in tattoos or permanent make-up” shall not be used for tattooing purposes.
9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).
10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning.

Legend

Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

### List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

### Seveso Directive

2012/18/EU (Seveso III)

| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
|---|---|---|---|
| | not assigned | | |

### Water Framework Directive (WFD)

List of pollutants (WFD)

| Name of substance | Name acc. to inventory | CAS No | Listed in | Remarks |
|---|---|---|---|---|
| 2-Ethyl-1-hexanol | Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment | | a) | |

Legend

a) Indicative list of the main pollutants

### Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

None of the ingredients are listed.

### National regulations (Netherlands)

### SZW-lijst CMR effects

None of the ingredients are listed.

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Complete revision of the safety data sheet.

### Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|---|---|
| 2017/164/EU | Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU |
| Acute Tox. | Acute toxicity |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |

| Abbr. | Descriptions of used abbreviations |
|---|---|
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard |
| Asp. Tox. | Aspiration hazard |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| CMR | Carcinogenic, Mutagenic or toxic for Reproduction |
| COD | Chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DMEL | Derived Minimal Effect Level |
| DNEL | Derived No-Effect Level |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| ED | Endocrine disruptor |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| EL50 | Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms |
| ELINCS | European List of Notified Chemical Substances |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| IOELV | Indicative occupational exposure limit value |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| LEL | Lower explosion limit (LEL) |

| Abbr. | Descriptions of used abbreviations |
|---|---|
| LL50 | Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality |
| LOEC | Lowest Observed Effect Concentration |
| log KOW | n-Octanol/water |
| NLP | No-Longer Polymer |
| NOEC | No Observed Effect Concentration |
| NOELR | No Observed Effect Loading Rate |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| SC-SZW | Staatscourant: Regeling van de Minister van Sociale Zaken en Werkgelegenheid tot wijziging van de Arbeidsomstandighedenregeling |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| STEL | Short-term exposure limit |
| STOT SE | Specific target organ toxicity - single exposure |
| SVHC | Substance of Very High Concern |
| TWA | Time-weighted average |
| UEL | Upper explosion limit (UEL) |
| vPvB | Very Persistent and very Bioaccumulative |

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

## Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|---|---|
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |

| Code | Text |
|---|---|
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

## Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.