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

1.1. Product identifier
984 Injector Direct Protection Diesel MF98400200DLI

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

1.3. Details of the supplier of the safety data sheet
Company name: TUNAP Deutschland Vertriebs GmbH & Co. Betriebs KG
Street: Bürgermeister-Seidl-Str. 2
Place: D-82515 Wolfratshausen
Telephone: +49 (0) 8171/1600 - 0
Fax: +49 (0) 8171/1600 - 40
E-mail: sdb@tunap.com
Internet: www.tunap.com

1.4. Emergency telephone number:
+49 (0) 30 30 686 790 (Giftnotruf Berlin)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Regulation (EC) No. 1272/2008
Hazard categories:
Flammable liquid: Flam. Liq. 3
Serious eye damage/eye irritation: Eye Dam. 1
Aspiration hazard: Asp. Tox. 1
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes serious eye damage.
Harmful to aquatic life with long lasting effects.

2.2. Label elements
Regulation (EC) No. 1272/2008
Hazard components for labelling
Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, < 2 % aromates
2-methylpropan-1-ol; iso-butanol
Signal word: Danger

Pictograms:

Hazard statements
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H318 Causes serious eye damage.
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.
P210  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260  Do not breathe vapours.
P280  Wear Eye/face protection.
P302+P352  IF ON SKIN: Wash with plenty of Water and soap...
P301+P330+P331  IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314  Get medical advice/attention if you feel unwell.
P271  Use only outdoors or in a well-ventilated area.
P273  Avoid release to the environment.
P501  Dispose of contents/container according to the official regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
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</thead>
<tbody>
<tr>
<td>64742-48-9</td>
<td>Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, &lt; 2 % aromates</td>
<td>50 - &lt;= 100 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>918-481-9</td>
<td>Asp. Tox. 1; H304 EUH066</td>
<td></td>
<td>01-2119457273-39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>78-83-1</td>
<td>2-methylpropan-1-ol; iso-butanol</td>
<td>5 - &lt; 10 %</td>
<td>603-108-00-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>201-148-0</td>
<td>Flam. Liq. 3, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H226 H335 H315 H318 H336</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27247-96-7</td>
<td>2-Ethylhexyl nitrate</td>
<td>5 - &lt; 10 %</td>
<td>01-2119539586-27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>128-37-0</td>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>1 - &lt; 3 %</td>
<td>01-2119565113-46</td>
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<td></td>
</tr>
<tr>
<td>104-76-7</td>
<td>2-Ethylhexan-1-ol</td>
<td>1 - &lt; 3 %</td>
<td>01-2119487289-20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.
After inhalation
Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin
Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion
Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

4.2. Most important symptoms and effects, both acute and delayed
Headache, nausea, dizziness, fatigue, skin irritation

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media

Unsuitable extinguishing media
High power water jet.

5.2. Special hazards arising from the substance or mixture
Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters
In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information
Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protection equipment.

6.2. Environmental precautions
Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Observe instructions for use.
Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
When using do not eat, drink, smoke, sniff.
Wear personal protection equipment (refer to section 8).

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking.

Further information on handling
Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed. Observe legal regulations and provisions.

Advice on storage compatibility
Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions
Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

Additive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
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</thead>
<tbody>
<tr>
<td>128-37-0</td>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>-</td>
<td>10</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
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<tr>
<td>78-83-1</td>
<td>2-Methylpropan-1-ol</td>
<td>50</td>
<td>154</td>
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<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75</td>
<td>231</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
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</table>

DNEL/DMEL values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>DNEL type</th>
<th>Exposure route</th>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>27247-96-7</td>
<td>2-Ethylhexyl nitrate</td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>0,35 mg/m³</td>
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<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>1 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>0,52 mg/kg bw/day</td>
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<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>oral</td>
<td>systemic</td>
<td>0,025 mg/kg bw/day</td>
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</table>
PNEC values

<table>
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<th>CAS No</th>
<th>Substance</th>
<th>Environmental compartment</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>27247-96-7</td>
<td>2-Ethylhexyl nitrate</td>
<td>Freshwater</td>
<td>0,0008 mg/l</td>
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<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0,00008 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>0,00074 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>0,00074 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Micro-organisms in sewage treatment plants (STP)</td>
<td>10 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>0,000191 mg/kg</td>
</tr>
</tbody>
</table>

Additional advice on limit values

a no restriction
b End of exposure or shift
c in long-term exposure: after several shifts
d prior to next shift

TWA (EC): time-weighted average
U: Urea

8.2. Exposure controls

Appropriate engineering controls
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures
Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Eye/face protection
Suitable eye protection: Tightly sealed safety glasses.
DIN EN 166

Hand protection
Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Suitable material: NBR (Nitrile rubber) Breakthrough time (maximum wearing time) 480min
Thickness of the glove material 0,45 mm
DIN EN 374

Skin protection
Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:
Suitable respiratory protective equipment: Combination filter device (DIN EN 141).
Filtering device with filter or ventilator filtering device of type: A
Observe the wear time limits as specified by the manufacturer.
Observe legal regulations and provisions.

Environmental exposure controls
Observe legal regulations and provisions.
9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: green
Odour: solvent like

Test method
pH-Value (at 20 °C): not determined DIN 19268

Changes in the physical state
Melting point: not determined
Initial boiling point and boiling range: 100 °C
Sublimation point: No information available.
Softening point: No information available.
Flash point: 33 °C ISO 3679

Flammability
Solid: not applicable
Gas: not applicable
Lower explosion limits: 0,5 vol. %
Upper explosion limits: 11,3 vol. %
Ignition temperature: No information available.

Auto-ignition temperature
Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties
Not oxidising.
Vapour pressure: not determined
Density (at 20 °C): 0,8 g/cm³ DIN 51757
Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents
not determined
Partition coefficient: not determined
Viscosity / dynamic: No information available. DIN 53019-1
Viscosity / kinematic: <20,5 mm²/s DIN EN ISO 3104
(at 40 °C)
Flow time: No information available. DIN EN ISO 2431
(at 20 °C)
Vapour density: not determined
Evaporation rate: not determined
Solvent separation test: No information available.
Solvent content: No information available.
9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable 0 Ignition hazard.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

Based on available data, the classification criteria are not met.
<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-48-9</td>
<td>Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, &lt; 2 % aromates</td>
<td>oral</td>
<td>LD50</td>
<td>&gt;8000 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;3160 mg/kg</td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4 h) vapour</td>
<td>LC50</td>
<td>4951 mg/l</td>
<td>Rat</td>
</tr>
<tr>
<td>78-83-1</td>
<td>2-methylpropan-1-ol; iso-butanol</td>
<td>oral</td>
<td>LD50</td>
<td>&gt; 2830 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt; 2000 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4 h) vapour</td>
<td>LC50</td>
<td>&gt; 24 mg/l</td>
<td>Rat</td>
</tr>
<tr>
<td>27247-96-7</td>
<td>2-Ethylhexyl nitrate</td>
<td>oral</td>
<td>LD50</td>
<td>&gt;9640 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;4820 mg/kg</td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4 h) vapour</td>
<td>LC50</td>
<td>11 mg/l</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>aerosol</td>
<td>ATE</td>
<td>1,5 mg/l</td>
<td></td>
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<tr>
<td>128-37-0</td>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>oral</td>
<td>LD50</td>
<td>2930 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;2000 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td>104-76-7</td>
<td>2-Ethylhexan-1-ol</td>
<td>oral</td>
<td>LD50</td>
<td>2047 mg/kg</td>
<td>Rat</td>
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<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;3000 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4 h) vapour</td>
<td>LC50</td>
<td>11 mg/l</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>aerosol</td>
<td>ATE</td>
<td>1,5 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**Irritation and corrosivity**
- Causes serious eye damage.
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**
- Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**
- Based on available data, the classification criteria are not met.
- No indications of human carcinogenicity exist.
- No indications of human germ cell mutagenicity exist.
- No indications of human reproductive toxicity exist.

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

**STOT-repeated exposure**
- Repeated exposure may cause skin dryness or cracking.

**Aspiration hazard**
- May be fatal if swallowed and enters airways. (Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, < 2 % aromates)

**Specific effects in experiment on an animal**
- No information available.

**Additional information on tests**
- The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
### 12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Dose</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-48-9</td>
<td>Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, &lt; 2 % aromates</td>
<td>Acute fish toxicity</td>
<td>LC50 &gt;1000 mg/l</td>
<td>96</td>
<td>h</td>
<td>Oncorhynchus mykiss (Rainbow trout)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50 &gt;1000 mg/l</td>
<td>96</td>
<td>h</td>
<td>Scenedesmus subspicatus</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50 &gt;1000 mg/l</td>
<td>48</td>
<td>h</td>
<td>Daphnia magna</td>
<td></td>
</tr>
<tr>
<td>78-83-1</td>
<td>2-methylpropan-1-ol; iso-butanol</td>
<td>Acute fish toxicity</td>
<td>LC50 1430 mg/l</td>
<td>96</td>
<td>h</td>
<td>Pimephales promelas</td>
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<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50 1250 mg/l</td>
<td>72</td>
<td>h</td>
<td>Desmodesmus subspicatus</td>
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<td>Acute crustacea toxicity</td>
<td>EC50 1439 mg/l</td>
<td>48</td>
<td>h</td>
<td>Daphnia magna</td>
<td></td>
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<tr>
<td>27247-96-7</td>
<td>2-Ethylhexyl nitrate</td>
<td>Acute fish toxicity</td>
<td>LC50 2 mg/l</td>
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<td>h</td>
<td>Danio rerio</td>
<td>Study report (2010)</td>
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<td>Acute algae toxicity</td>
<td>ErC50 &gt; 12,6 mg/l</td>
<td>72</td>
<td>h</td>
<td>Pseudokirchneriella subcapitata</td>
<td>Study report (1998)</td>
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<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50 &gt; 12,6 mg/l</td>
<td>48</td>
<td>h</td>
<td>Daphnia magna</td>
<td>Study report (1998)</td>
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<tr>
<td></td>
<td></td>
<td>Acute bacteria toxicity</td>
<td>(&gt;1000 mg/l)</td>
<td>3 h</td>
<td>activated sludge of a predominantly domestic sewag</td>
<td>Study report (2010)</td>
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<td>Acute fish toxicity</td>
<td>LC50 0,42 mg/l</td>
<td>96</td>
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<td>Brachydanio rerio (zebra-fish)</td>
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<td></td>
<td>Acute algae toxicity</td>
<td>ErC50 0,42 mg/l</td>
<td>72</td>
<td>h</td>
<td>Scenedesmus subspicatus</td>
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<td>Acute crustacea toxicity</td>
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<td>104-76-7</td>
<td>2-Ethylhexan-1-ol</td>
<td>Acute fish toxicity</td>
<td>LC50 17,1 mg/l</td>
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<td>h</td>
<td>Leuciscus idus (golden orfe)</td>
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<td>ErC50 11,5 mg/l</td>
<td>72</td>
<td>h</td>
<td>Scenedesmus subspicatus</td>
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<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50 39 mg/l</td>
<td>48</td>
<td>h</td>
<td>Daphnia magna</td>
<td></td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

The product has not been tested.

### Partition coefficient n-octanol/water

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-83-1</td>
<td>2-methylpropan-1-ol; iso-butanol</td>
<td>0.79</td>
</tr>
<tr>
<td>27247-96-7</td>
<td>2-Ethylhexyl nitrate</td>
<td>5.24</td>
</tr>
<tr>
<td>104-76-7</td>
<td>2-Ethylhexan-1-ol</td>
<td>2.9</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

The product has not been tested.
12.6. Other adverse effects
No information available.

Further information
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Advice on disposal
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products
070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Waste disposal number of used product
070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Waste disposal number of contaminated packaging
150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging
This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (iso-butanol)
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3
Classification code: F1
Special Provisions: 274 601
Limited quantity: 5 L
Excepted quantity: E1
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

Inland waterways transport (ADN)
14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (iso-butanol)
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3
Classification code: F1
Section 14: Transport 

### Marine transport (IMDG)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (iso-butanol)
14.3. Transport hazard class(es): III
14.4. Packing group: III
14.5. Special precautions for user
Warning: Combustible liquids.

### Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (iso-butanol)
14.3. Transport hazard class(es): III
14.4. Packing group: III
14.5. Special precautions for user
Warning: Combustible liquids.

### Environmental hazards

No environmentally hazardous.

### Special precautions for user

Warning: Combustible liquids.

### Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

SECTION 15: Regulatory information

### EU regulatory information

#### Restrictions on use (REACH, annex XVII):
Entry 28: Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, < 2 % aromates

- 2010/75/EU (VOC): No information available.
- 2004/42/EC (VOC): No information available.

### Additional information

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

### National regulatory information
Employment restrictions: Observe restrictions to employment for juveniles according to the ‘juvenile work protection guideline’ (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 2 - clearly water contaminating

**15.2 Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information**

**Changes**
This data sheet contains changes from the previous version in section(s): 14.

**Abbreviations and acronyms**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

**Relevant H and EUH statements (number and full text)**

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- 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.
- EUH044 Risk of explosion if heated under confinement.
- EUH066 Repeated exposure may cause skin dryness or cracking.

**Further Information**
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)*