



Safety Data Sheet

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 1 of 17

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

1.1. Product identifier

938 Injector Intensive Cleaner MF93800500AB

UFI: 96S3-10WX-800Y-S39V

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

Use of the substance/mixture

Cleaner

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name: TUNAP GmbH & Co. KG
Street: Bürgermeister-Seidl-Str. 2
Place: D-82515 Wolfratshausen
Telephone: + 49 (0) 8171/1600 - 0
E-mail: sdb@tunap.com
Internet: www.tunap.com

Telefax: + 49 (0) 8171/1600 - 40

Supplier

Company name: TUNAP (UK) Limited
Street: Unit 12 Tonbridge Trade Park, Ingot Way
Place: GB Tonbridge, Kent. TN9 1GN
Telephone: +44 (0)1732 365163
E-mail: sdb@tunap.com
Internet: www.tunap.co.uk

1.4. Emergency telephone number:

111 NHS (National Health Service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Aerosol 1; H222-H229
Asp. Tox. 1; H304
Eye Dam. 1; H318
Skin Sens. 1; H317
STOT SE 3; H336
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics
n-propanol
(R)-p-mentha-1,8-diene, d-limonene

Signal word: Danger

Pictograms:



**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 2 of 17

Hazard statements

| | |
|------|--|
| H222 | Extremely flammable aerosol. |
| H229 | Pressurised container: May burst if heated. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |

Precautionary statements

| | |
|----------------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |
| P251 | Do not pierce or burn, even after use. |
| P261 | Avoid breathing spray. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing and eye protection/face protection. |
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P304+P312 | IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |

Special labelling of certain mixtures

| | |
|--------|---|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
|--------|---|

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 3 of 17

Relevant ingredients

| CAS No | Chemical name | | | Quantity |
|------------|--|--------------|------------------|-------------|
| | EC No | Index No | REACH No | |
| | Classification (GB CLP Regulation) | | | |
| 64742-48-9 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | | | 25 - < 50 % |
| | 918-481-9 | | 01-2119457273-39 | |
| | Asp. Tox. 1; H304 EUH066 | | | |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | | | 10 - < 20 % |
| | 927-241-2 | | 01-2119471843-32 | |
| | Flam. Liq. 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 3; H226 H336 H304 H412 EUH066 | | | |
| 71-23-8 | n-propanol | | | 10 - < 20 % |
| | 200-746-9 | 603-003-00-0 | 01-2119486761-29 | |
| | Flam. Liq. 2, Eye Dam. 1, STOT SE 3; H225 H318 H336 | | | |
| 34590-94-8 | (2-methoxymethylethoxy)propanol | | | 5 - < 10 % |
| | 252-104-2 | | | |
| | | | | |
| 27247-96-7 | 2-Ethylhexyl nitrate | | | 3 - < 5 % |
| | 248-363-6 | | 01-2119539586-27 | |
| | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Aquatic Chronic 2; H332 H312 H302 H411 EUH044 EUH066 | | | |
| 5989-27-5 | (R)-p-mentha-1,8-diene, d-limonene | | | 1 - < 3 % |
| | 227-813-5 | | | |
| | Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H315 H317 H304 H400 H410 | | | |
| 104-76-7 | 2-Ethylhexan-1-ol | | | 1 - < 3 % |
| | 203-234-3 | | 01-2119487289-20 | |
| | Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H332 H315 H319 H335 | | | |
| 110-91-8 | morpholine | | | 0.1 - < 1 % |
| | 203-815-1 | | 01-2119496057-30 | |
| | Flam. Liq. 3, Repr. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1; H226 H361fd H331 H311 H302 H314 H318 | | | |

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

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 4 of 17

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|------------|-----------|---|-------------|
| | | Specific Conc. Limits, M-factors and ATE | |
| 64742-48-9 | 918-481-9 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | 25 - < 50 % |
| | | inhalation: LC50 = 4951 mg/l (vapours); dermal: LD50 = >3160 mg/kg; oral: LD50 = >8000 mg/kg | |
| | 927-241-2 | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | 10 - < 20 % |
| | | inhalation: LC50 = > 4951 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg | |
| 71-23-8 | 200-746-9 | n-propanol | 10 - < 20 % |
| | | inhalation: LC50 = > 33,8 mg/l (vapours); dermal: LD50 = 4032 mg/kg; oral: LD50 = 8000 mg/kg | |
| 34590-94-8 | 252-104-2 | (2-methoxymethylethoxy)propanol | 5 - < 10 % |
| | | inhalation: LC50 = 500 mg/l (vapours); dermal: LD50 = 13000 mg/kg; oral: LD50 = 5135 mg/kg | |
| 27247-96-7 | 248-363-6 | 2-Ethylhexyl nitrate | 3 - < 5 % |
| | | inhalation: LC50 = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = >4820 mg/kg; oral: LD50 = >9640 mg/kg | |
| 5989-27-5 | 227-813-5 | (R)-p-mentha-1,8-diene, d-limonene | 1 - < 3 % |
| | | dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg | |
| 104-76-7 | 203-234-3 | 2-Ethylhexan-1-ol | 1 - < 3 % |
| | | inhalation: LC50 = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 3000 mg/kg; oral: LD50 = 2047 mg/kg | |
| 110-91-8 | 203-815-1 | morpholine | 0.1 - < 1 % |
| | | inhalation: LC50 = 8 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = ca. 500 mg/kg; oral: LD50 = ca. 1900 mg/kg | |

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. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water fog. Foam. Carbon dioxide (CO₂). Extinguishing powder.



Safety Data Sheet

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 5 of 17

Unsuitable extinguishing media

Full 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

Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

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.

For non-emergency personnel

First aider: Pay attention to self-protection!

For emergency responders

Fight fire with normal precautions from a reasonable distance.

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

For containment

Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Absorb with liquid-binding material (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).

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 6 of 17

Advice on general occupational hygiene

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

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.

Hints on joint storage

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

Further information on storage conditions

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|------------|----------------------------------|-----|-------------------|-----------|---------------|--------|
| 34590-94-8 | (2-methoxymethylethoxy) propanol | 50 | 308 | | TWA (8 h) | WEL |
| 104-76-7 | 2-ethylhexan-1-ol | 1 | 5.4 | | TWA (8 h) | WEL |
| 110-91-8 | Morpholine | 10 | 36 | | TWA (8 h) | WEL |
| | | 20 | 72 | | STEL (15 min) | WEL |
| 71-23-8 | Propan-1-ol | 200 | 500 | | TWA (8 h) | WEL |
| | | 250 | 625 | | STEL (15 min) | WEL |

DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|----------------------|----------------|----------|------------------------|
| 27247-96-7 | 2-Ethylhexyl nitrate | | | |
| Worker DNEL, long-term | | inhalation | systemic | 0,35 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 1 mg/kg bw/day |
| Consumer DNEL, long-term | | dermal | systemic | 0,52 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 0,025 mg/kg bw/day |
| 110-91-8 | morpholine | | | |
| Worker DNEL, long-term | | inhalation | systemic | 91 mg/m ³ |
| Worker DNEL, long-term | | inhalation | local | 36 mg/m ³ |
| Worker DNEL, acute | | inhalation | local | 72 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 1,04 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 6,3 mg/kg bw/day |

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 7 of 17

PNEC values

| CAS No | Substance | Value |
|--|----------------------|----------------|
| Environmental compartment | | |
| 27247-96-7 | 2-Ethylhexyl nitrate | |
| Freshwater | | 0,0008 mg/l |
| Marine water | | 0,00008 mg/l |
| Freshwater sediment | | 0,00074 mg/kg |
| Marine sediment | | 0,00074 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 10 mg/l |
| Soil | | 0,000191 mg/kg |
| 110-91-8 morpholine | | |
| Freshwater | | 0,163 mg/l |
| Freshwater (intermittent releases) | | 0,09 mg/l |
| Marine water | | 0,016 mg/l |
| Freshwater sediment | | 1,83 mg/kg |
| Marine sediment | | 0,183 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 10 mg/l |
| Soil | | 0,269 mg/kg |

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

blood (B)
Urine (U)

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection: Tightly sealed safety glasses.
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: 480min
Thickness of the glove material 0,45 mm
EN ISO 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



Safety Data Sheet

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 8 of 17

Observe the wear time limits as specified by the manufacturer.

Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|----------------|
| Physical state: | Aerosol |
| Colour: | yellow-brown |
| Odour: | characteristic |

| | | |
|---|----------------|--------------------|
| Melting point/freezing point: | not determined | Test method |
| Boiling point or initial boiling point and boiling range: | 97 °C | |
| Flammability: | not applicable | |

| | |
|-------------------------|------|
| Lower explosion limits: | 0,5 |
| Upper explosion limits: | 13,5 |

| | |
|----------------------------|----------|
| Flash point: | 26 °C |
| Auto-ignition temperature: | > 200 °C |

| | |
|----------------------------|----------------|
| Decomposition temperature: | not determined |
|----------------------------|----------------|

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

| | |
|------------------------|---------------------------|
| Viscosity / kinematic: | < 20,5 mm ² /s |
|------------------------|---------------------------|

| | |
|-------------------|-----------|
| Water solubility: | insoluble |
|-------------------|-----------|

| | |
|------------------------------|----------------|
| Solubility in other solvents | not determined |
|------------------------------|----------------|

| | |
|--|----------------|
| Partition coefficient n-octanol/water: | not determined |
|--|----------------|

| | |
|------------------|----------------|
| Vapour pressure: | not determined |
|------------------|----------------|

| | | |
|---------------------|-------------------------|-----------|
| Density (at 20 °C): | 0,815 g/cm ³ | DIN 51757 |
|---------------------|-------------------------|-----------|

| | |
|--------------------------|----------------|
| Relative vapour density: | not determined |
|--------------------------|----------------|

9.2. Other information

Information with regard to physical hazard classes

| | |
|------------------------|-------------------|
| Sustaining combustion: | No data available |
|------------------------|-------------------|

| | |
|---------------------------|--|
| Self-ignition temperature | |
|---------------------------|--|

| | |
|--------|----------------|
| Solid: | not applicable |
|--------|----------------|

| | |
|------|----------------|
| Gas: | not applicable |
|------|----------------|

| | |
|----------------------|--|
| Oxidizing properties | |
|----------------------|--|

| | |
|----------------|--|
| Not oxidising. | |
|----------------|--|

Other safety characteristics

| | |
|-------------------|----------------|
| Evaporation rate: | not determined |
|-------------------|----------------|

| | |
|----------------|----------------|
| Solid content: | not determined |
|----------------|----------------|

| | |
|--------------------|----------------|
| Sublimation point: | not applicable |
|--------------------|----------------|

| | |
|------------------|----------------|
| Softening point: | not applicable |
|------------------|----------------|

| | |
|-------------|----------------|
| Pour point: | not determined |
|-------------|----------------|

Further Information

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol.

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 9 of 17

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. 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 hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

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

ATEmix calculated

ATE (oral) > 5000 mg/kg; ATE (dermal) > 5000 mg/kg; ATE (inhalation vapour) > 50 mg/l; ATE (inhalation dust/mist) > 12,5 mg/l



Safety Data Sheet

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 10 of 17

| CAS No | Chemical name | | | | | |
|------------|--|---------------------|-----------|---------------------|--------------------|--|
| | Exposure route | Dose | Species | Source | Method | |
| 64742-48-9 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | | | | | |
| | oral | LD50 >8000 mg/kg | Rat | | | |
| | dermal | LD50 >3160 mg/kg | Rabbit | | | |
| | inhalation (4 h) vapour | LC50 4951 mg/l | Rat | | | |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | | | | | |
| | oral | LD50 > 5000 mg/kg | Rat | | | |
| | dermal | LD50 > 5000 mg/kg | Rabbit | | | |
| | inhalation (4 h) vapour | LC50 > 4951 mg/l | Rat | | | |
| 71-23-8 | n-propanol | | | | | |
| | oral | LD50 8000 mg/kg | Rat | | | |
| | dermal | LD50 4032 mg/kg | Rabbit | | | |
| | inhalation (4 h) vapour | LC50 > 33,8 mg/l | Rat | | | |
| 34590-94-8 | (2-methoxymethylethoxy)propanol | | | | | |
| | oral | LD50 5135 mg/kg | Rat | | | |
| | dermal | LD50 13000 mg/kg | Rabbit | | | |
| | inhalation vapour | LC50 500 mg/l | Rat | | | |
| 27247-96-7 | 2-Ethylhexyl nitrate | | | | | |
| | oral | LD50 >9640 mg/kg | Rat | | | |
| | dermal | LD50 >4820 mg/kg | Rabbit | | | |
| | inhalation (4 h) vapour | LC50 11 mg/l | Rat | | | |
| | inhalation dust/mist | ATE 1,5 mg/l | | | | |
| 5989-27-5 | (R)-p-mentha-1,8-diene, d-limonene | | | | | |
| | oral | LD50 > 2000 mg/kg | Rat | Study report (2010) | OECD Guideline 423 | |
| | dermal | LD50 > 2000 mg/kg | Kaninchen | IUCLID | | |
| 104-76-7 | 2-Ethylhexan-1-ol | | | | | |
| | oral | LD50 2047 mg/kg | Rat | | | |
| | dermal | LD50 > 3000 mg/kg | Rat | | | |
| | inhalation (4 h) vapour | LC50 11 mg/l | Rat | | | |
| | inhalation dust/mist | ATE 1,5 mg/l | | | | |
| 110-91-8 | morpholine | | | | | |
| | oral | LD50 ca. 1900 mg/kg | Rat | Study report (1967) | OECD Guideline 401 | |

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 11 of 17

| | | | | | | |
|--|-------------------------|---------------|----------|--------|--|--------------------|
| | dermal | LD50 mg/kg | ca. 500 | Rabbit | Arch. Ind. Hyg Occup. Med. 10 61–68 (195) | OECD Guideline 402 |
| | inhalation (4 h) vapour | LC50 | 8 mg/l | Rat | | |
| | inhalation dust/mist | ATE | 0,5 mg/l | | | |

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye damage.

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

Repeated exposure may cause skin dryness or cracking.

Sensitising effects

May cause an allergic skin reaction. ((R)-p-mentha-1,8-diene, d-limonene)

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

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

No indication of human carcinogenicity.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

Ingestion, Inhalation, Skin contact, Eye contact.

Reference to other sections: 2.1, 4.2.

Specific effects in experiment on an animal

No information available.

11.2. Information on other hazards**Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information**12.1. Toxicity**

Toxic to aquatic life with long lasting effects.



Safety Data Sheet

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 12 of 17

| CAS No | Chemical name | | | | | |
|------------|--|----------------------|-----------|---|---------------------|--------------------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 64742-48-9 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | | | | | |
| | Acute fish toxicity | LC50 >1000 mg/l | 96 h | Oncorhynchus mykiss (Rainbow trout) | | |
| | Acute algae toxicity | ErC50 >1000 mg/l | 96 h | Scenedesmus subspicatus | | |
| | Acute crustacea toxicity | EC50 >1000 mg/l | 48 h | Daphnia magna | | |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | | | | | |
| | Acute fish toxicity | LC50 >1000 mg/l | 96 h | Oncorhynchus mykiss (Rainbow trout) | | |
| | Acute algae toxicity | ErC50 >1000 mg/l | 72 h | Pseudokirchneriella subcapitata | | |
| | Acute crustacea toxicity | EC50 >1000 mg/l | 48 h | Daphnia magna | | |
| 71-23-8 | n-propanol | | | | | |
| | Acute fish toxicity | LC50 4480 mg/l | 96 h | Pimephales promelas | | |
| 34590-94-8 | (2-methoxymethylethoxy)propanol | | | | | |
| | Acute fish toxicity | LC50 10000 mg/l | 96 h | Pimephales promelas | | |
| | Acute algae toxicity | ErC50 969 mg/l | 96 h | Pseudokirchneriella subcapitata | | |
| | Acute crustacea toxicity | EC50 1919 mg/l | 48 h | Daphnia magna | | |
| 27247-96-7 | 2-Ethylhexyl nitrate | | | | | |
| | Acute fish toxicity | LC50 2 mg/l | 96 h | Danio rerio | Study report (2010) | OECD Guideline 203 |
| | Acute algae toxicity | ErC50 > 12,6 mg/l | 72 h | Pseudokirchneriella subcapitata | Study report (1998) | OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 > 12,6 mg/l | 48 h | Daphnia magna | Study report (1998) | OECD Guideline 202 |
| | Acute bacteria toxicity | EC50 > 1000 mg/l () | 3 h | activated sludge of a predominantly domestic sewage | Study report (2010) | OECD Guideline 209 |
| 5989-27-5 | (R)-p-mentha-1,8-diene, d-limonene | | | | | |
| | Acute fish toxicity | LC50 0,72 mg/l | 96 h | Pimephales promelas | Study report (1990) | OECD Guideline 203 |
| | Acute algae toxicity | ErC50 0,32 mg/l | 72 h | Pseudokirchneriella subcapitata | Study report (2013) | OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 0,307 mg/l | 48 h | Daphnia magna | Study report (2013) | OECD Guideline 202 |
| | Fish toxicity | NOEC 0,37 mg/l | 8 d | Pimephales promelas | Study report (2015) | OECD Guideline 212 |
| | Crustacea toxicity | NOEC 0,08 mg/l | 21 d | Daphnia magna | Study report (2016) | OECD Guideline 211 |
| | Acute bacteria toxicity | EC50 209 mg/l () | 3 h | activated sludge of a predominantly domestic sewage | Study report (2010) | OECD Guideline 209 |
| 104-76-7 | 2-Ethylhexan-1-ol | | | | | |

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 13 of 17

| | | | | | | | |
|----------|--------------------------|---------------|----------|------|------------------------------------|----------------------------------|---|
| | Acute fish toxicity | LC50 mg/l | 17,1 | 96 h | Leuciscus idus (golden orfe) | | |
| | Acute algae toxicity | ErC50 mg/l | 11,5 | 72 h | Scenedesmus subspicatus | | |
| | Acute crustacea toxicity | EC50 | 39 mg/l | 48 h | Daphnia magna | | |
| 110-91-8 | morpholine | | | | | | |
| | Acute fish toxicity | LC50 | 380 mg/l | 96 h | Oncorhynchus mykiss | Chemosphere 9: 753-762 (1980) | other: IRSA |
| | Acute algae toxicity | ErC50 | 28 mg/l | 96 h | Pseudokirchneriella subcapitata | Chemosphere 9: 753-762 (1980) | other: EPA, National Eutrophication Rese |
| | Acute crustacea toxicity | EC50 mg/l | 44,5 | 48 h | Daphnia magna | Study report (1997) | OECD Guideline 202 |
| | Algae toxicity | NOEC | 10 mg/l | 4 d | Desmodesmus subspicatus | | |
| | Crustacea toxicity | NOEC | 5 mg/l | 21 d | Daphnia magna | Study report (1997) | OECD Guideline 211 |

12.2. Persistence and degradability

The product has not been tested.

| CAS No | Chemical name | | | |
|------------|--|-------------|----|--------|
| | Method | Value | d | Source |
| | Evaluation | | | |
| 64742-48-9 | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | | | |
| | OECD Guideline 301 F | 89,8 | 28 | ECHA |
| | Readily biodegradable (according to OECD criteria). | | | |
| | Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclenes, <2% aromatics | | | |
| | OECD Guideline 301 F | 89 % | 28 | ECHA |
| 71-23-8 | n-propanol | | | |
| | OECD Prüfrichtlinie 301F | 83 - 92 % | 28 | |
| 34590-94-8 | (2-methoxymethylethoxy)propanol | | | |
| | OECD 301 F | 75% | 10 | |
| | leicht abbaubar | | | |
| 104-76-7 | 2-Ethylhexan-1-ol | | | |
| | OECD Guideline 301 C | 79 – 99,9 % | 14 | |
| 110-91-8 | morpholine | | | |
| | OECD 301E | 93% | 25 | |
| | Easily biodegradable (concerning to the criteria of the OECD) | | | |
| | OECD 302B | 92% | 28 | |

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|------------|------------------------------------|---------|
| 71-23-8 | n-propanol | 0,29 |
| 27247-96-7 | 2-Ethylhexyl nitrate | 5,24 |
| 5989-27-5 | (R)-p-mentha-1,8-diene, d-limonene | 4,38 |
| 104-76-7 | 2-Ethylhexan-1-ol | 2,9 |
| 110-91-8 | morpholine | -2,55 |



Safety Data Sheet

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 14 of 17

BCF

| CAS No | Chemical name | BCF | Species | Source |
|-----------|------------------------------------|-------|-----------------|----------------------|
| 5989-27-5 | (R)-p-mentha-1,8-diene, d-limonene | 908,5 | | Other company data (|
| 110-91-8 | morpholine | 0 | Cyprinus carpio | Review article or ha |

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. 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

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|--|-----------------|
| 14.1. UN number or ID number: | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS |
| 14.3. Transport hazard class(es): | 2 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Classification code: | 5F |
| Special Provisions: | 190 327 344 625 |
| Limited quantity: | 1 L |
| Excepted quantity: | E0 |
| Transport category: | 2 |
| Tunnel restriction code: | D |

Inland waterways transport (ADN)

| | |
|--------------------------------------|---------|
| 14.1. UN number or ID number: | UN 1950 |
|--------------------------------------|---------|

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 15 of 17

| | |
|--|-----------------|
| 14.2. UN proper shipping name: | AEROSOLS |
| 14.3. Transport hazard class(es): | 2 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Classification code: | 5F |
| Special Provisions: | 190 327 344 625 |
| Limited quantity: | 1 L |
| Excepted quantity: | E0 |

Marine transport (IMDG)

| | |
|--|---------------------------------|
| 14.1. UN number or ID number: | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS (2-Ethylhexyl nitrate) |
| 14.3. Transport hazard class(es): | 2.1 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Marine pollutant: | yes |
| Special Provisions: | 63, 190, 277, 327, 344, 381,959 |
| Limited quantity: | 1000 mL |
| Excepted quantity: | E0 |
| EmS: | F-D, S-U |

Air transport (ICAO-TI/IATA-DGR)

| | |
|--|---------------------|
| 14.1. UN number or ID number: | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS, flammable |
| 14.3. Transport hazard class(es): | 2.1 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Special Provisions: | A145 A167 A802 |
| Limited quantity Passenger: | 30 kg G |
| Passenger LQ: | Y203 |
| Excepted quantity: | E0 |
| IATA-packing instructions - Passenger: | 203 |
| IATA-max. quantity - Passenger: | 75 kg |
| IATA-packing instructions - Cargo: | 203 |
| IATA-max. quantity - Cargo: | 150 kg |

14.5. Environmental hazards

| | |
|-----------------------------|----------------------|
| ENVIRONMENTALLY HAZARDOUS: | Yes |
| Danger releasing substance: | 2-ethylhexyl nitrate |

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions: No information available.

Directive 2004/42/EC on VOC in paints and varnishes: No information available.



Safety Data Sheet

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 16 of 17

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Aerosol Directive (75/324/EEC)

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

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): 2,11.

Abbreviations and acronyms

Aerosol: Aerosols

Flam. Liq: Flammable liquids

Acute Tox: Acute toxicity

Asp. Tox: Aspiration hazard

Skin Corr: Skin corrosion

Skin Irrit: Skin irritation

Eye Dam: Eye damage

Eye Irrit: Eye irritation

Skin Sens: Skin sensitisation

Repr: Reproductive toxicity

STOT SE: Specific target organ toxicity - single exposure

Aquatic Acute: Acute aquatic hazard

Aquatic Chronic: Chronic aquatic hazard

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

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 (division of the American Chemical Society)

DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level

WEL (UK): Workplace Exposure Limits

TWA (EC): Time-Weighted Average

ATE: Acute Toxicity Estimate

STEL (EC) Short Term Exposure Limit

LC50: Lethal Concentration

EC50: half maximal Effective Concentration

ErC50: means EC50 in terms of reduction of growth rate

Classification for mixtures and used evaluation method according to GB CLP Regulation

| Classification | Classification procedure |
|-------------------------|--------------------------|
| Aerosol 1; H222-H229 | On basis of test data |
| Asp. Tox. 1; H304 | Calculation method |
| Eye Dam. 1; H318 | Calculation method |
| Skin Sens. 1; H317 | Calculation method |
| STOT SE 3; H336 | Calculation method |
| Aquatic Chronic 2; H411 | Calculation method |

**Safety Data Sheet**

according to UK REACH Regulation

938 Injector Intensive Cleaner MF93800500AB

Revision date: 12.08.2024

Product code: 1102349

Page 17 of 17

Relevant H and EUH statements (number and full text)

| | |
|--------|--|
| H222 | Extremely flammable aerosol. |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H229 | Pressurised container: May burst if heated. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H311 | Toxic in contact with skin. |
| 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. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| 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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)