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

1.1 Product identifier
   Trade name: Opteon™ SF80 Specialty Fluid
   SDS-Identcode: 130000144304

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Use of the Substance/Mixture: Cleaning agent
   Recommended restrictions on use: For use in industrial installations only., Do not use product for anything outside of the above specified uses

1.3 Details of the supplier of the safety data sheet
   Company: Chemours Netherlands B.V.
   Baanhoekweg 22
   3313 LA Dordrecht Netherlands
   Telephone: +31-(0)-78-630-1011
   Telefax: +31-78-6163737
   E-mail address of person responsible for the SDS: sds-support@chemours.com

1.4 Emergency telephone number
   +(44)-870-8200418 (CHEMTREC - Recommended)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification (REGULATION (EC) No 1272/2008)
   Acute toxicity, Category 4 H332: Harmful if inhaled.
   Eye irritation, Category 2 H319: Causes serious eye irritation.
   Specific target organ toxicity - single exposure, Category 3 H336: May cause drowsiness or dizziness.
   Long-term (chronic) aquatic hazard, Category 3 H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
Hazard pictograms

Signal word: Warning

Hazard statements:
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H336 May cause drowsiness or dizziness.
- H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements:
- EUH018 In use may form flammable/explosive vapour-air mixture.

Precautionary statements:
- Prevention:
  - P264 Wash skin thoroughly after handling.
  - P271 Use only outdoors or in a well-ventilated area.
  - P273 Avoid release to the environment.
  - P280 Wear eye protection/face protection.
- Response:
  - P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
  - P337 + P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.
Rapid evaporation of the product may cause frostbite.

Hazardous components which must be listed on the label:
Trans-Dichloroethylene

Additional Labelling
EUH209 Can become highly flammable in use.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans-Dichloroethylene</td>
<td>156-60-5</td>
<td>205-860-2</td>
<td></td>
<td>Flam. Liq. 2; H225 Acute Tox. 4; H332</td>
<td>&gt;= 90 - &lt;= 100</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET  
according to Regulation (EC) No. 1907/2006

Opteon™ SF80 Specialty Fluid

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders: First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

In case of skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

If swallowed: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: May cause cardiac arrhythmia.

Risks: Causes serious eye irritation. Harmful if inhaled. May cause drowsiness or dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.
SECTION 5: Firefighting measures

5.1 Extinguishing media

| Suitable extinguishing media                          | Water spray                           |
|                                                     | Alcohol-resistant foam                |
|                                                     | Carbon dioxide (CO2)                  |
|                                                     | Dry chemical                          |

 Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Vapours may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides, Chlorine compounds, Hydrogen fluoride, carbonyl fluoride.

5.3 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Soak up with inert absorbent material. For large spills, provide dyeing or other appropriate containment to keep material from spreading. If dyed material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation: If sufficient ventilation is unavailable, use with local exhaust ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Advice on safe handling: Do not get on skin or clothing. Do not breathe vapours or spray mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures: If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Do not expose drums to direct heat or temperature above 46°C (115°F) to avoid pressurizing and possibly distorting the drums. Material should not be dispensed by pouring from pail/drum shipping containers containing 5 gallons or more. The use of a drum pump is recommended for dispensing from...
pail/drum shipping containers with 5 gallons or more, except for smaller containers where adequate ventilation can be used to manage the exposure. Keep in properly labelled containers. Store locked up. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations.

**Advice on common storage**: No special restrictions on storage with other products.

**Storage period**: > 10 yr

**Recommended storage temperature**: < 46 °C

**Further information on storage stability**: The product has an indefinite shelf life when stored properly.

### 7.3 Specific end use(s)

**Specific use(s)**: No data available

---

**SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans-Dichloroethylene</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>797 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>198 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>57 mg/kg bw/day</td>
</tr>
</tbody>
</table>

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans-Dichloroethylene</td>
<td>Fresh water</td>
<td>0.0364 mg/l</td>
</tr>
<tr>
<td></td>
<td>Freshwater - intermittent</td>
<td>0.3636 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.0036 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.055 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.5483 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>17 mg/l</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.056 mg/kg dry weight (d.w.)</td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls

**Engineering measures**

Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

**Personal protective equipment**

Eye protection: Wear the following personal protective equipment:
- Safety goggles
- Equipment should conform to BS EN 166

Hand protection

- **Material**: Chemical-resistant gloves
- **Remarks**: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.

Skin and body protection

- Wear the following personal protective equipment:
  - If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.

Respiratory protection

- If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type: Self-contained breathing apparatus

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

- **Appearance**: liquid
- **Colour**: clear, colourless
- **Odour**: slight
- **Odour Threshold**: No data available
- **pH**: 7
- **Melting point/freezing point**: No data available
- **Initial boiling point and boiling range**: 47 °C
- **Flash point**: does not flash
Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper flammability limit : Upper flammability limit 15.25 % (V)

Lower explosion limit / Lower flammability limit : Lower flammability limit 7.25 % (V)

Vapour pressure : 447 hPa

Relative vapour density : 1.71

Density : 1.29 g/cm3

Solubility(ies) : 
    Water solubility : No data available

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : 
    Viscosity, kinematic : 0.42 mm2/s

Explosive properties : In use may form flammable/explosive vapour-air mixture. Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

    Flammability (liquids) : Not applicable

    Particle size : Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity
    Not classified as a reactivity hazard.

10.2 Chemical stability
    Stable under normal conditions.

10.3 Possibility of hazardous reactions
    Hazardous reactions : Vapours may form flammable mixture with air
                          In use may form flammable/explosive vapour-air mixture.

10.4 Conditions to avoid
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Version 3.3  Revision Date: 07.10.2019  SDS Number: 2316174-00008  Date of last issue: 09.07.2019

Date of first issue: 06.12.2017

Conditions to avoid : None known.

10.5 Incompatible materials
Materials to avoid : None.

10.6 Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure:
- Inhalation
- Skin contact
- Ingestion
- Eye contact

Acute toxicity
Harmful if inhaled.

Product:
Acute inhalation toxicity:
- Acute toxicity estimate: 11.59 mg/l
- Exposure time: 4 h
- Test atmosphere: vapour
- Method: Calculation method

Components:
Trans-Dichloroethylene:
Acute oral toxicity:
- LD50 (Rat): 7,902 mg/kg
- Method: OECD Test Guideline 420

Acute inhalation toxicity:
- Lowest observed adverse effect concentration (Dog): 250000 ppm
- Test atmosphere: gas
- Cardiac sensitisation threshold limit (Dog): 991,309 mg/m3
- Test atmosphere: gas
- Acute toxicity estimate: 11 mg/l
- Exposure time: 4 h
- Test atmosphere: vapour
- Method: Expert judgement
- Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity:
- LD50 (Rabbit): > 5,000 mg/kg
- Method: OECD Test Guideline 402

Methoxytridecafluoroheptene isomers:
Acute oral toxicity:
- LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity: LC50 (Rat): > 222.15 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity: LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation
Not classified based on available information.

Components:

Trans-Dichloroethylene:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Mild skin irritation

Methoxytridecafluoroheptene isomers:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation
Causes serious eye irritation.

Components:

Trans-Dichloroethylene:
Species: Rabbit
Method: OECD Test Guideline 405
Result: Irritation to eyes, reversing within 7 days

Methoxytridecafluoroheptene isomers:
Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified based on available information.

Components:

Methoxytridecafluoroheptene isomers:
Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Method : OECD Test Guideline 429
Result : negative

Germ cell mutagenicity
Not classified based on available information.

Components:

Trans-Dichloroethylene:
Genotoxicity in vitro :
Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo :
Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity- Assessment :
Weight of evidence does not support classification as a germ cell mutagen.

Methoxytridecafluoroheptene isomers:
Germ cell mutagenicity- Assessment :
Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

Components:

Trans-Dichloroethylene:
Effects on foetal development :
Test Type: Embryo-foetal development
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: negative

STOT - single exposure
May cause drowsness or dizziness.
Components:

**Trans-Dichloroethylene**:
Assessment : May cause drowsiness or dizziness.

**STOT - repeated exposure**
Not classified based on available information.

Components:

**Trans-Dichloroethylene**:
Exposure routes : Inhalation
Assessment : No significant health effects observed in animals at concentrations of 250 ppmV/6h/d or less.

Exposure routes : Ingestion
Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**Methoxytridecafluorohexcone isomers**:
Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

**Trans-Dichloroethylene**:
Species : Rat, male and female
NOAEL : 4000 ppm
LOAEL : > 4000 ppm
Application Route : Inhalation
Exposure time : 90 Days
Method : OECD Test Guideline 413

Species : Rat, male and female
NOAEL : 3,210 mg/kg
LOAEL : > 3,210 mg/kg
Application Route : Ingestion
Exposure time : 98 Days
Method : OECD Test Guideline 408

**Methoxytridecafluorohexcone isomers**:
Species : Rat
NOAEL : 1,000 mg/kg

Remarks : No significant adverse effects were reported
**Application Route**: Ingestion

**Exposure time**: 90 d

**Remarks**: No significant adverse effects were reported

**SECTION 12: Ecological information**

### 12.1 Toxicity

**Components:**

**Trans-Dichloroethylene:**

- **Toxicity to fish**: LC50 (Lepomis macrochirus (Bluegill sunfish)): 135 mg/l
  - Exposure time: 96 h
  - Remarks: Based on data from similar materials

- **Toxicity to daphnia and other aquatic invertebrates**: EC50 (Daphnia magna (Water flea)): 220 mg/l
  - Exposure time: 48 h
  - Method: EPA-660/3-75-009

- **Toxicity to algae/aquatic plants**: EbC50 (Pseudokirchneriella subcapitata (green algae)): 36.36 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 201

**Methoxytridecafluoroheptene isomers:**

- **Toxicity to fish**: LC50 (Oryzias latipes (Orange-red killifish)): > 0.096 mg/l
  - Exposure time: 96 h
  - Remarks: No toxicity at the limit of solubility

- **Toxicity to daphnia and other aquatic invertebrates**: EC50 (Daphnia magna (Water flea)): > 0.157 mg/l
  - Exposure time: 48 h
  - Remarks: No toxicity at the limit of solubility

- **Toxicity to algae/aquatic plants**: EC50 (Pseudokirchneriella subcapitata (green algae)): > 0.000477 mg/l
  - Exposure time: 72 h
  - Remarks: No toxicity at the limit of solubility

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

- **NOEC**: 0.107 mg/l
  - Exposure time: 21 d
  - Species: Daphnia magna (Water flea)
  - Method: OECD Test Guideline 211
  - Remarks: No toxicity at the limit of solubility

**Ecotoxicology Assessment**

- **Chronic aquatic toxicity**: May cause long lasting harmful effects to aquatic life.
12.2 Persistence and degradability

**Components:**

**Trans-Dichloroethylene:**
- Biodegradability: Result: not rapidly degradable
- Method: OECD Test Guideline 301D

**Methoxytridecafluoroheptene isomers:**
- Biodegradability: Result: Inherently biodegradable.
  - Biodegradation: 0.00 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

**Components:**

**Trans-Dichloroethylene:**
- Partition coefficient: n-octanol/water: log Pow: 2.06

**Methoxytridecafluoroheptene isomers:**
- Bioaccumulation: Species: Cyprinus carpio (Carp)
  - Bioconcentration factor (BCF): 1,990

12.4 Mobility in soil

**Components:**

**Methoxytridecafluoroheptene isomers:**
- Distribution among environmental compartments: log Koc: 4.5
  - Remarks: immobile

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

**Global warming potential**

Regulation (EU) No 517/2014 on fluorinated greenhouse gases

**Product:**
- 100-year global warming potential: 0

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product:**
- Dispose of in accordance with local regulations.
- According to the European Waste Catalogue, Waste Codes
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
Not regulated as a dangerous good

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
Not regulated as a dangerous good

14.4 Packing group
Not regulated as a dangerous good

14.5 Environmental hazards
Not regulated as a dangerous good

14.6 Special precautions for user
Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Remarks: Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances: Conditions of restriction for the following entries should be considered:
15.2 Chemical safety assessment
Chemical Safety Assessments have been carried out for these substances.

SECTION 16: Other information

Other information: Opteon™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC. Chemours™ and the Chemours Logo are trademarks of The Chemours Company. Before use read Chemours safety information. For further information contact the local Chemours office or nominated distributors.

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H336: May cause drowsiness or dizziness.
H412: Harmful to aquatic life with long lasting effects.
H413: May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations
Acute Tox.: Acute toxicity
Aquatic Chronic: Long-term (chronic) aquatic hazard
Eye Irrit.: Eye irritation
Flam. Liq.: Flammable liquids
STOT SE: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical
Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture: Classification procedure:
- Acute Tox. 4
  - H332
  - Calculation method
- Eye Irrit. 2
  - H319
  - Calculation method
- STOT SE 3
  - H336
  - Calculation method
- Aquatic Chronic 3
  - H412
  - Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

GB / EN