

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Tetrabutylammonium fluoride 1M in THF

article number: **1448**
Version: **1.0 en**

date of compilation: 2017-08-28

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

1.1 Product identifier

| | |
|---------------------------------|------------------------------------|
| Identification of the substance | Tetrabutylammonium fluoride |
| Article number | 1448 |
| Registration number (REACH) | |
| EC number | 207-057-2 |
| CAS number | 429-41-4 |

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

Identified uses:

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

e-mail (competent person) : sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

| Classification acc. to GHS | | | |
|----------------------------|---|---------------------------|------------------|
| Section | Hazard class | Hazard class and category | Hazard statement |
| 2.6 | flammable liquid | (Flam. Liq. 2) | H225 |
| 3.2 | skin corrosion/irritation | (Skin Corr. 1B) | H314 |
| 3.3 | serious eye damage/eye irritation | (Eye Dam. 1) | H318 |
| 3.6 | carcinogenicity | (Carc. 2) | H351 |
| 3.8R | specific target organ toxicity - single exposure (respiratory tract irritation) | (STOT SE 3) | H335 |

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Supplemental hazard information

| Code | Supplemental hazard information |
|--------|---------------------------------|
| EUH019 | may form explosive peroxides |

2.2 Label elements

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

Signal word

Danger

Pictograms



Hazard statements

| | |
|------|---|
| H225 | Highly flammable liquid and vapour |
| H314 | Causes severe skin burns and eye damage |
| H335 | May cause respiratory irritation |
| H351 | Suspected of causing cancer |

Precautionary statements

Precautionary statements - prevention

| | |
|------|--|
| P210 | Keep away from heat. No smoking. |
| P260 | Do not breathe mist/vapours. |
| P280 | Wear protective gloves/eye protection. |

Precautionary statements - response

| | |
|----------------|--|
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor. |

For professional users only

Supplemental hazard information

EUH019 May form explosive peroxides.

Hazardous ingredients for labelling: Tetrahydrofuran, Tetrabutylammonium fluoride

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



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| | |
|----------------|--|
| H314 | Causes severe skin burns and eye damage. |
| H351 | Suspected of causing cancer. |
| P260 | Do not breathe mist/vapours. |
| P280 | Wear protective gloves/eye protection. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor. |
| EUH019 | May form explosive peroxides. |
| contains: | Tetrahydrofuran, Tetrabutylammonium fluoride |

2.3 Other hazards





There is no additional information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

| Name of substance | Identifier | wt% | Classification acc. to 1272/2008/EC | Pictograms | Specific Conc. Limits |
|-----------------------------|--|---------|--|--|---|
| Tetrahydrofuran | CAS No 109-99-9 EC No 203-726-8 Index No 603-025-00-0 REACH Reg. No 01-2119444314- 46-xxxx | > 70 | Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 Carc. 2 / H351 STOT SE 3 / H335 EUH019 |    | Eye Irrit. 2; H319: C ≥ 25 % STOT SE 3; H335: C ≥ 25 % |
| Tetrabutylammonium fluoride | CAS No 429-41-4 EC No 207-057-2 | 20 – 30 | Skin Corr. 1B / H314 |  | |

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing.

Following inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

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Following skin contact

After contact with skin, wash immediately with plenty of water. In case of skin irritation, consult a physician.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, Corrosion, Narcotic effects, Nausea, Vomiting, Risk of serious damage to eyes, Dyspnoea

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours can form explosive mixtures with air.

5.3 Advice for firefighters

Vapours are heavier than air. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Do not breathe vapour/spray. Avoid contact with skin and eyes. Avoidance of ignition sources. Provide adequate ventilation.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Explosive properties.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

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Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaust at critical locations. Avoid exposure. When not in use, keep containers tightly closed.

• Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Advice on general occupational hygiene

Wash hands before breaks and after work. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a cool place.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

• Ventilation requirements

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 4 °C.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Notation | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Source |
|---------|-----------------|----------|----------|------------|-----------|--------------------------|------------|---------------------------|----------------------|
| EU | tetrahydrofuran | 109-99-9 | | IOELV | 50 | 150 | 100 | 300 | 2000/39/EC |
| IE | tetrahydrofuran | 109-99-9 | | OELV | 50 | 150 | 100 | 300 | S.I. No. 619 of 2001 |

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

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

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Relevant DNELs/DMELs/PNECs and other threshold levels

• relevant DNELs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|-------------------|----------|-----------|-----------------------|------------------------------------|-------------------|----------------------------|
| Tetrahydrofuran | 109-99-9 | DNEL | 300 mg/m ³ | human, inhalatory | worker (industry) | acute - local effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 300 mg/m ³ | human, inhalatory | worker (industry) | acute - systemic effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 150 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 25 mg/kg | human, dermal | worker (industry) | chronic - systemic effects |
| Tetrahydrofuran | 109-99-9 | DNEL | 150 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |

• relevant PNECs of components of the mixture

| Name of substance | CAS No | Endpoint | Threshold level | Environmental compartment |
|-------------------|----------|----------|-----------------|------------------------------|
| Tetrahydrofuran | 109-99-9 | PNEC | 4,32 mg/l | freshwater |
| Tetrahydrofuran | 109-99-9 | PNEC | 0,432 mg/l | marine water |
| Tetrahydrofuran | 109-99-9 | PNEC | 4,6 mg/l | sewage treatment plant (STP) |
| Tetrahydrofuran | 109-99-9 | PNEC | 23,3 mg/kg | freshwater sediment |
| Tetrahydrofuran | 109-99-9 | PNEC | 2,33 mg/kg | marine sediment |
| Tetrahydrofuran | 109-99-9 | PNEC | 67 mg/kg | water |
| Tetrahydrofuran | 109-99-9 | PNEC | 2,13 mg/kg | soil |

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggle with side protection. Wear face protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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- **type of material**

Butyl caoutchouc (butyl rubber)

- **material thickness**

0,7mm

- **breakthrough times of the glove material**

>10 minutes (permeation: level 1)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Flame-retardant protective clothing.

Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|-----------------|-------------------|
| Physical state | liquid (fluid) |
| Colour | colourless |
| Odour | like ether |
| Odour threshold | No data available |

Other physical and chemical parameters

| | |
|---|--|
| pH (value) | This information is not available. |
| Melting point/freezing point | not determined |
| Initial boiling point and boiling range | 65 – 66 °C (data apply to the main component) |
| Flash point | -17 °C |
| Evaporation rate | no data available |
| Flammability (solid, gas) | not relevant (fluid) |
| <u>Explosive limits</u> | |
| • lower explosion limit (LEL) | 1,5 vol% (data apply to the main component) |
| • upper explosion limit (UEL) | 12,4 vol% (data apply to the main component) |
| Explosion limits of dust clouds | not relevant |
| Vapour pressure | This information is not available. |
| Density | 0,9 – 1,1 g/cm ³ at 20 °C |
| Vapour density | This information is not available. |
| Bulk density | Not applicable |
| Relative density | Information on this property is not available. |

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Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

n-octanol/water (log KOW) This information is not available.

Auto-ignition temperature 215 °C - (data apply to the main component)

Decomposition temperature no data available

Viscosity not determined

Explosive properties Shall not be classified as explosive

Oxidising properties none

9.2 Other information

Temperature class (EU, acc. to ATEX) T3 (Maximum permissible surface temperature on the equipment: 200°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Risk of ignition. Vapours can form explosive mixtures with air.

10.2 Chemical stability

Reactivity if exposed to light. May form explosive peroxides.

10.3 Possibility of hazardous reactions

Violent reaction with: Alkali hydroxide (caustic alkali), Peroxides, Phenols, Bromine, Oxidisers, Oxygen,
=> Explosive properties

10.4 Conditions to avoid

Direct light irradiation. Keep away from heat.

10.5 Incompatible materials

plastic and rubber

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

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Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Carcinogenicity:

Suspected of causing cancer

• Specific target organ toxicity - single exposure

May cause respiratory irritation.

• Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting, nausea, If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

• If inhaled

Irritation to respiratory tract, breathing difficulties, Dyspnoea

• If on skin

irritation, corrosion

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|-------------------|----------|----------|------------|---------------------|---------------|
| Tetrahydrofuran | 109-99-9 | LC50 | 2.160 mg/l | Pimephales promelas | 96 h |

12.2 Process of degradability

The substance is readily biodegradable.

Degradability of components of the mixture

| Name of substance | CAS No | Process | Degradation rate | Time |
|-------------------|----------|------------------|------------------|------|
| Tetrahydrofuran | 109-99-9 | biotic/abiotic | 39 % | 28 d |
| Tetrahydrofuran | 109-99-9 | oxygen depletion | 39 % | 28 d |

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12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

| Name of substance | CAS No | Log KOW |
|-------------------|----------|--------------|
| Tetrahydrofuran | 109-99-9 | 0,45 (25 °C) |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

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

SECTION 14: Transport information

| | | |
|------|--|--|
| 14.1 | UN number | 2924 |
| 14.2 | UN proper shipping name | FLAMMABLE LIQUID, CORROSIVE, N.O.S. |
| | Hazardous ingredients | Tetrahydrofuran, Tetrabutylammonium fluoride |
| 14.3 | Transport hazard class(es) | |
| | Class | 3 (flammable liquids) |
| 14.4 | Packing group | II (substance presenting medium danger) |
| 14.5 | Environmental hazards | none (non-environmentally hazardous acc. to the dangerous goods regulations) |
| 14.6 | Special precautions for user | |
| | Provisions for dangerous goods (ADR) should be complied within the premises. | |

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14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

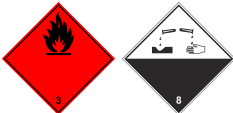
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

| | |
|---|---|
| UN number | 2924 |
| Proper shipping name | FLAMMABLE LIQUID, CORROSIVE, N.O.S. |
| Particulars in the transport document | UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S., (contains: Tetrahydrofuran, Tetrabutylammonium fluoride), 3 (8), II, (D/E) |
| Class | 3 |
| Classification code | FC |
| Packing group | II |
| Danger label(s) | 3+8 |
|  | |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |
| Transport category (TC) | 2 |
| Tunnel restriction code (TRC) | D/E |
| Hazard identification No | 338 |

• International Maritime Dangerous Goods Code (IMDG)

| | |
|---|--|
| UN number | 2924 |
| Proper shipping name | FLAMMABLE LIQUID, CORROSIVE, N.O.S. |
| Particulars in the shipper's declaration | UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S., (contains: Tetrahydrofuran, Tetrabutylammonium fluoride), 3 (8), II, -17°C c.c. |
| Class | 3 |
| Subsidiary risk(s) | 8 |
| Marine pollutant | - |
| Packing group | II |
| Danger label(s) | 3+8 |
|  | |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |


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| | |
|---|--|
| EmS | F-E, S-C |
| Stowage category | B |
| • International Civil Aviation Organization (ICAO-IATA/DGR) | |
| UN number | 2924 |
| Proper shipping name | Flammable liquid, corrosive, n.o.s. |
| Particulars in the shipper's declaration | UN2924, Flammable liquid, corrosive, n.o.s., (contains: Tetrahydrofuran, Tetrabutylammonium fluoride), 3 (8), II |
| Class | 3 |
| Subsidiary risk(s) | 8 |
| Packing group | II |
| Danger label(s) | 3+8 |
|  | |
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 0,5 L |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

• Restrictions according to REACH, Annex XVII

| Name of substance | CAS No | Wt% | Type of registration | No |
|-----------------------------|--------|------|-------------------------|----|
| Tetrabutylammonium fluoride | | 100 | 1907/2006/EC annex XVII | 3 |
| Tetrahydrofuran | | 73,8 | 1907/2006/EC annex XVII | 40 |

• Seveso Directive

| 2012/18/EU (Seveso III) | | | | |
|-------------------------|---------------------------------------|---|--------|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | | Notes |
| P5c | flammable liquids (cat. 2, 3) | 5.000 | 50.000 | 51) |

Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

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- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 73,8 %

- **Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content 73,8 %

National inventories

- EINECS/ELINCS/NLP (Europe)
- DSL/NDSL (Canada)
- Toxic Substance Control Act (TSCA)

15.2 Chemical Safety Assessment

SECTION 16: Other information

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------|---|
| 2000/39/EC | Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| Carc. | carcinogenicity |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| CMR | Carcinogenic, Mutagenic or toxic for Reproduction |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DMEL | Derived Minimal Effect Level |
| DNEL | Derived No-Effect Level |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| Eye Dam. | seriously damaging to the eye |
| Eye Irrit. | irritant to the eye |
| Flam. Liq. | flammable liquid |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |

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| Abbr. | Descriptions of used abbreviations |
|----------------------|---|
| index No | the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| IOELV | indicative occupational exposure limit value |
| log KOW | n-octanol/water |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| S.I. No. 619 of 2001 | Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 |
| Skin Corr. | corrosive to skin |
| Skin Irrit. | irritant to skin |
| STEL | short-term exposure limit |
| STOT SE | specific target organ toxicity - single exposure |
| TWA | time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | very Persistent and very Bioaccumulative |

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

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

| Code | Text |
|------|---|
| H225 | highly flammable liquid and vapour |
| H314 | causes severe skin burns and eye damage |
| H318 | causes serious eye damage |
| H319 | causes serious eye irritation |
| H335 | may cause respiratory irritation |
| H351 | suspected of causing cancer |

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Disclaimer

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.