

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Fuel Cartridge - M5, M10, M28

Methanol
 Registration number (ECHA): --
 Index: 603-001-00-X
 EINECS, ELINCS, NLP: 200-659-6
 CAS: 67-56-1

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

Relevant identified uses of the substance or mixture:

Fuel Cell

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

SFC Energy AG, Eugen-Sänger-Ring 7, 85649 Brunnthal, Germany
 Phone: +49 (0)89 673-592-0, Fax: +49 (0)89 673-592-369
 info@sfc.com

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

GB

+49 89 19240 (D-81675 Munich, 24 hour)

IRL

National Poisons Information Centre, Beaumont Hospital, Dublin 9, Ireland, Tel.:
 (+353) 01 809 2166 (Public Poisons Info Line, 8am-10pm, 7 days a week)
 (+353) 01 809 2566 (Info for Healthcare Professionals ONLY, 24 h, 7 days a week)

Telephone number of the company in case of emergencies:

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement |
|--------------|-----------------|--|
| Flam. Liq. | 2 | H225-Highly flammable liquid and vapour. |
| Acute Tox. | 3 | H331-Toxic if inhaled. |
| Acute Tox. | 3 | H311-Toxic in contact with skin. |
| STOT SE | 1 | H370-Causes damage to organs. |
| Acute Tox. | 3 | H301-Toxic if swallowed. |

2.2 Label elements

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Labeling according to Regulation (EC) 1272/2008 (CLP)



Methanol
 CAS: 67-56-1, Index:603-001-00-X EC: 200-659-6

Danger

H225-Highly flammable liquid and vapour. H331-Toxic if inhaled. H311-Toxic in contact with skin. H370-Causes damage to organs. H301-Toxic if swallowed.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children. P103-Read label before use.
 P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241-Use explosion-proof electrical, ventilating and lighting equipment and tools. P243-Take precautionary measures against static discharge. P260-Do not breathe vapours.
 P307+P311-IF exposed: Call a POISON CENTER or doctor/physician.
 P403+P235-Store in a well-ventilated place. Keep cool. P405-Store locked up.
 P501-Dispose of contents/container in accordance with all local, regional, national and international laws.

2.3 Other hazards

No vPvB substance
 No PBT substance

SECTION 3: Composition/information on ingredients

3.1 Substance

| Methanol | Substance for which an EU exposure limit value applies. |
|---|---|
| Registration number (REACH) | -- |
| Index | 603-001-00-X |
| EINECS, ELINCS, NLP | 200-659-6 |
| CAS | 67-56-1 |
| content % | |
| Classification according to Regulation (EC) 1272/2008 (CLP) | Flam. Liq. 2, H225 Acute Tox. 3, H331 Acute Tox. 3, H311 Acute Tox. 3, H301 STOT SE 1, H370 |

3.2 Mixture

n.a.

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
 The substances named in this section are given with their actual, appropriate classification!

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For substances that are listed in appendix VI, table 3.1/3.2 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

Medical supervision necessary due to possibility of delayed reaction.

Assure the safety of the rescuer.

Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.

Supply person with fresh air. Call doctor immediately.

If the person is unconscious, place in a stable side position and consult a doctor.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap. Call a doctor immediately, keep datasheet at hand

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Give copious water to drink - consult doctor immediately.

Induce vomiting.

Allow drinking approx. 100 ml approx. 40% ethanol in esculent.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

The following may occur:

After resorption:

Nausea

Vomiting

Headaches

Dizziness

Danger of blindness

Acidosis

Drop in blood pressure

Cramps

Narcotic effect.

Coma

Liver and kidney damage

Disturbed heart rhythm

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Toxic gases

Explosive vapour/air mixture

Dangerous vapours heavier than air.

In case of spreading near the ground, flashback to distance sources of ignition is possible.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

Full protection

Cool container at risk with water.

Water jet spray / alcohol resistant foam / CO2 / dry extinguisher

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

Remove possible causes of ignition - do not smoke.

Take measures against electrostatic charging, if appropriate.

If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent from entering drainage system.

If accidental entry into drainage system occurs, inform responsible authorities.

Danger of explosion

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

Use no flammable substances.

Flush residue using copious water.

Fill the absorbed material into lockable containers.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.

Avoid inhalation of the vapours.

If applicable, suction measures at the workstation or on the processing machine necessary.

Avoid contact with eyes or skin.

Keep away from sources of ignition - Do not smoke.

Take precautions against electrostatic charges.

Take explosion-prevention measures if applicable.

Use explosion-proof equipment.

Earth devices.

Do not use on hot surfaces.

Also seal emptied tanks and tanks in the process after they have been used.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

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Keep out of access to unauthorised individuals.
 Store product closed and only in original packing.
 Not to be stored in gangways or stair wells.
 Solvent resistant floor
 Do not store with flammable or self-igniting materials.
 Do not store with oxidizing agents.
 Protect against moisture and store closed.
 Store in a well ventilated place.
 Protect from direct sunlight and warming.
 Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").
 Keep locked away.
 Store cool.
 Unsuitable material:
 Various plastics
 Magnesium
 Zinc alloys

7.3 Specific end use(s)
 No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Chemical Name | Methanol | Content %: |
|--|---|------------|
| WEL-TWA: 200 ppm (266 mg/m3) (WEL), 200 ppm (260 mg/m3) (EU) | WEL-STEL: 250 ppm (333 mg/m3) (WEL) | --- |
| Monitoring procedures: | - Compur - KITA-119 SA (549 640) - Compur - KITA-119 U (549 657) - Draeger - Alcohol 25/a Methanol (81 01 631) DFG (D) (Loesungsmittelgemische 6), DFG (E) (Solvent mixtures 6) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 65-1 (2004) - Draeger - Alcohol 25/a (81 01 631) - Draeger - Alcohol 100/a (CH 29 701) | |
| BMGV: --- | Other information: Sk (WEL, EU) | |

| Chemical Name | Methanol | Content %: |
|--|---|------------|
| OELV-8h: 200 ppm (260 mg/m3) (OELV-8h, EC) | OELV-15min: --- | --- |
| Monitoring procedures: | - Compur - KITA-119 SA (549 640) - Compur - KITA-119 U (549 657) - Draeger - Alcohol 25/a Methanol (81 01 631) DFG (D) (Loesungsmittelgemische 6), DFG (E) (Solvent mixtures 6) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 65-1 (2004) - Draeger - Alcohol 25/a (81 01 631) - Draeger - Alcohol 100/a (CH 29 701) | |
| BLV: 15mg methanol/L urine (End of shift, B, Ns) | Other information: Sk (IOELV, EC) | |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period)
 EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

OELV-8h = Occupational Exposure Limit Value (8-hour reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction. | OELV-15min = Occupational Exposure Limit Value (15-minute reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction. | BLV = Biological limit value | Other information: Carc1A, Carc1B = carcinogenic substance, Cat. 1A or 1B. Muta1A, Muta1B = mutagenic substance, Cat. 1A or 1B. Repr1A, Repr1B = Substances known to be toxic for reproduction, Cat. 1A or 1B. Sk = can be absorbed through skin. Asphx = asphyxiant. Sen = Respiratory sensitizer. BOELV = Binding Occupational Exposure Limit Values. IOELV = Indicative Occupational Exposure Limit

Values.

| Methanol | | | | | | |
|----------------------------|--|------------------------------|-------------------|--------------|-----------------------|-------------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
| Workers / employees | Human - dermal | Short term, systemic effects | DNEL | 40 | mg/kg body weight/day | |
| Workers / employees | Human - inhalation | Short term, systemic effects | DNEL | 260 | mg/m ³ | |
| Workers / employees | Human - inhalation | Short term, local effects | DNEL | 260 | mg/m ³ | |
| Workers / employees | Human - dermal | Long term, systemic effects | DNEL | 40 | mg/kg body weight/day | |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 260 | mg/m ³ | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 260 | mg/m ³ | |
| Consumer | Human - dermal | Short term, systemic effects | DNEL | 8 | mg/kg body weight/day | |
| Consumer | Human - inhalation | Short term, systemic effects | DNEL | 50 | mg/m ³ | |
| Consumer | Human - oral | Short term, systemic effects | DNEL | 8 | mg/kg body weight/day | |
| Consumer | Human - dermal | Long term, systemic effects | DNEL | 8 | mg/kg body weight/day | |
| Consumer | Human - inhalation | Long term, systemic effects | DNEL | 50 | mg/m ³ | |
| Consumer | Human - oral | Long term, systemic effects | DNEL | 8 | mg/kg body weight/day | |
| | Environment - freshwater | | PNEC | 154 | mg/l | |
| | Environment - marine | | PNEC | 154 | mg/l | |
| | Environment - sediment, freshwater | | PNEC | 570,4 | mg/kg | |
| | Environment - sediment, marine | | PNEC | 57,04 | mg/kg | |
| | Environment - soil | | PNEC | 23,5 | mg/kg | |
| | Environment - water, sporadic (intermittent) release | | PNEC | 1540 | mg/l | |
| | Environment - sewage treatment plant | | PNEC | 100 | mg/l | |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

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Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

Recommended

With short-term contact:

Protective Viton® / fluoroelastomer gloves (EN 374)

Permeation time (penetration time) in minutes:

> 120

With long-term contact:

Protective gloves in butyl rubber (EN 374).

Permeation time (penetration time) in minutes:

> 480

References

Protective hand cream recommended.

The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

According to operation.

Protective working garment, antistatic (EN1149)

Natural fibre or heat-resistant synthetic fibre

Respiratory protection:

If OES or MEL is exceeded.

With short-term contact:

Gas mask filter AX (EN 14387), code colour brown.

With long-term contact:

Protective respirator with independent air supply.

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|-------------------------------|----------------|
| Physical state: | Liquid |
| Colour: | Colourless |
| Odour: | Alcoholic |
| Odour threshold: | Not determined |
| pH-value: | Not determined |
| Melting point/freezing point: | -98 °C |

| | |
|--|---|
| Initial boiling point and boiling range: | 64,7 °C |
| Flash point: | 11 °C |
| Evaporation rate: | Not determined |
| Flammability (solid, gas): | Not determined |
| Lower explosive limit: | 5,5 Vol-% |
| Upper explosive limit: | 44 Vol-% |
| Vapour pressure: | 128 hPa (20°C) |
| Vapour density (air = 1): | 1,11 (References) |
| Density: | 0,79 g/cm ³ (20°C) |
| Bulk density: | Not determined |
| Solubility(ies): | Not determined |
| Water solubility: | Soluble |
| Partition coefficient (n-octanol/water): | -0,77 (References log Pow) |
| Auto-ignition temperature: | 455 °C (Ignition temperature) |
| Decomposition temperature: | Not determined |
| Viscosity: | 0,597 mPas (20°C, References) |
| Explosive properties: | Possible build up of explosive/highly flammable vapour/air mixture. Product is not explosive. |
| Oxidising properties: | Not determined |

9.2 Other information

| | |
|---------------------------|----------------|
| Miscibility: | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity: | Not determined |
| Surface tension: | Not determined |
| Solvents content: | Not determined |

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No decomposition if used as intended.

10.4 Conditions to avoid

See also section 7.

Heating, open flame, ignition sources

Protect from humidity.

Product is hygroscopic.

Electrostatic charge

10.5 Incompatible materials

See also section 7.

Alkali metals

Alkaline-earth metals

Development of:

Hydrogen gas

Exothermic reaction possible with:

Acids

Acid halide

Acid anhydrides

Reducing agent

Danger of explosion with:

Oxidizing agents

Perchlorates

Peroxides

Perchloric acid

Chromium (VI) trioxide

Chlorates

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Nitric acid
 Oxides of nitrogen
 Halogens
 Magnesium
 Hydrogen peroxide

10.6 Hazardous decomposition products

See also section 5.2
 No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

| Methanol | | | | | | |
|---|-----------------|--------------|-------------|-----------------|--|--|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD0 | 143 | mg/kg | Human being | | |
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | IUCLID Chem. Data Sheet (ESIS) | Not relevant for classification. |
| Acute toxicity, by oral route: | ATE | 300 | mg/kg | Human being | | Experiences on persons. |
| Acute toxicity, by dermal route: | LD50 | 17100 | mg/kg | Rabbit | | Does not conform with EU classification. |
| Acute toxicity, by inhalation: | LC50 | 85 | mg/l/4h | Rat | | Not relevant for classification. |
| Skin corrosion/irritation: | | | | Rabbit | | Mild irritant |
| Serious eye damage/irritation: | | | | Rabbit | OECD 405 (Acute Eye Irritation/Corrosion) | Mild irritant |
| Respiratory or skin sensitisation: | | | | Guinea pig | OECD 406 (Skin Sensitisation) | Not sensitizing |
| Germ cell mutagenicity: | | | | | OECD 471 (Bacterial Reverse Mutation Test) | Negative |
| Carcinogenicity: | | | | | | n.d.a. |
| Reproductive toxicity: | | | | | | n.d.a. |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | n.d.a. |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | n.d.a. |
| Aspiration hazard: | | | | | | n.d.a. |
| Symptoms: | | | | | | abdominal pain, vomiting, headaches, gastrointestinal disturbances, drowsiness, visual disturbances, watering eyes, nausea, mental confusion |

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

| Methanol | | | | | | | |
|--------------------------|-----------------|-------------|--------------|-------------|-----------------|--------------------|--------------|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |

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| | | | | | | | |
|------------------------------------|--------------|-----|------------|------|---------------------|--|-----------------------|
| Toxicity to fish: | LC50 | 96h | 15400 | mg/l | Lepomis macrochirus | | |
| Toxicity to daphnia: | EC50 | 48h | >1000 0 | mg/l | Daphnia magna | | |
| Toxicity to algae: | IC50 | 72h | 8000 | mg/l | | | |
| Persistence and degradability: | BOD5/CO D | | <50 | % | | | |
| Bioaccumulative potential: | BCF | | 28400 | | Chlorella vulgaris | | |
| Mobility in soil: | | | | | | | n.d.a. |
| Results of PBT and vPvB assessment | | | | | | | n.d.a. |
| Other adverse effects: | | | | | | | n.d.a. |
| Other information: | BOD | | >60 | % | | | Readily biodegradable |
| Other information: | DOC | | <70 | % | | | |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

13 07 03 other fuels (including mixtures)

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

SECTION 14: Transport information

General statements

UN number: 3473

Transport by road/by rail (ADR/RID)

UN proper shipping name:

UN 3473 FUEL CELL CARTRIDGES

Transport hazard class(es):

3

Packing group:

-

Classification code:

F3

LQ (ADR 2015):

1 L

Environmental hazards:

Not applicable

Tunnel restriction code:

E

Transport by sea (IMDG-code)

UN proper shipping name:

FUEL CELL CARTRIDGES

Transport hazard class(es):

3

Packing group:

-

EmS:

F-E, S-D



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Marine Pollutant: n.a
 Environmental hazards: Not applicable

Transport by air (IATA)

UN proper shipping name:
 Fuel cell cartridges
 Transport hazard class(es): 3
 Packing group: -
 Environmental hazards: Not applicable



Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 Precautions must be taken to prevent damage.

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

Freighted as packaged goods rather than in bulk, therefore not applicable.
 Minimum amount regulations have not been taken into account.
 Danger code and packing code on request.
 Comply with special provisions.

SECTION 15: Regulatory information

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

For classification and labelling see Section 2.
 Observe restrictions:
 Comply with trade association/occupational health regulations.
 Observe youth employment law (German regulation).
 Observe law on protection of expectant mothers (German regulation).
 TA air:
 I 100%

15.2 Chemical safety assessment

There is no chemical safety report available.

SECTION 16: Other information

Revised sections: 1 - 16
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.
 Employee training in handling dangerous goods is required.
 The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
 H225 Highly flammable liquid and vapour.
 H301 Toxic if swallowed.
 H311 Toxic in contact with skin.
 H331 Toxic if inhaled.
 H370 Causes damage to organs.
 Flam. Liq. — Flammable liquid
 Acute Tox. — Acute toxicity - inhalation
 Acute Tox. — Acute toxicity - dermal
 STOT SE — Specific target organ toxicity - single exposure
 Acute Tox. — Acute toxicity - oral

Any abbreviations and acronyms used in this document:

AC Article Categories
 acc., acc. to according, according to
 ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOEL Acceptable Operator Exposure Level

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

CAS Chemical Abstracts Service

CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids

CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

COD Chemical oxygen demand

CTFA Cosmetic, Toiletry, and Fragrance Association

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

DT50 Dwell Time - 50% reduction of start concentration

DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community

ECHA European Chemicals Agency

EEA European Economic Area

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ERC Environmental Release Categories

ES Exposure scenario

etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

HGWP Halocarbon Global Warming Potential

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

LC lethal concentration

LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute of Occupational Safety and Health (United States of America)
NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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