



Safety Data Sheet dated 4/7/2019, version 6

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

1.1. Product identifier

Mixture identification:

Trade name: De-icer
Trade code: 34016

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

Recommended use:

Defroster liquid.

1.3. Details of the supplier of the safety data sheet

Supplier:

Arexons S.p.A.
via Antica di Cassano, 23, 20063
Cernusco sul Naviglio (MI), Italy

Arexons S.p.A.
Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Competent person responsible for the safety data sheet:

arexons@arexons.it

1.4. Emergency telephone number

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Centro Antiveleni di Pavia IRCCS- Fondazione Maugeri tel. +39 (0)382 24444 (h24; it, en)

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

In Ireland: Beaumont Hospital - National Poisons Information Centre 01 809 2166 (7days, 8:00 - 22:00)

In South Africa: Poison Information Helpline 0861 555 777

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

⚠ Danger, Flam. Liq. 2, Highly flammable liquid and vapour.

⚠ Warning, Eye Irrit. 2, Causes serious eye irritation.

⚠ Warning, STOT SE 3, May cause drowsiness or dizziness.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements:

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

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smoking.

P271 Use only outdoors or in a well-ventilated area.

P370+P378 In case of fire: Use foam for alcohols to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

PACK2 The packing must have tactile indications of danger for blind people.

Contains

Isopropyl alcohol

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

>= 90% Isopropyl alcohol

REACH No.: 01-2119457558-25, Index number: 603-117-00-0, CAS: 67-63-0, EC: 200-661-7

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H336

>= 3% - < 5% ethylene glycol

REACH No.: 01-2119456816-28, Index number: 603-027-00-1, CAS: 107-21-1, EC: 203-473-3

⚠ 3.1/4 Oral Acute Tox. 4 H302

⚠ 3.9/2 STOT RE 2 H373

>= 0.001% - < 0.005% 1-methoxy-2-propanol

REACH No.: 01-2119457435-35, Index number: 603-064-00-3, CAS: 107-98-2, EC: 203-539-1

⚠ 2.6/3 Flam. Liq. 3 H226

⚠ 3.8/3 STOT SE 3 H336

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

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Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media:

Not Recommended Extinguishing Media:

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

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

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Store at below 50 °C. Keep away from unguarded flame and heat sources. Avoid direct

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exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Isopropyl alcohol - CAS: 67-63-0

20101.11 - TWA: 983 mg/m³, 400 ppm

20101.12 - TWA: 492 mg/m³, 200 ppm

ACGIH - TWA(8h): 200 ppm - STEL: 400 ppm - Notes: A4, BEI - Eye and URT irr, CNS impair

ethanediol - CAS: 107-21-1

20101.06 - TWA(8h): 52 mg/m³, 20 ppm - STEL: 104 mg/m³, 40 ppm

EU - TWA(8h): 52 mg/m³, 20 ppm - STEL: 104 mg/m³, 40 ppm - Notes: Skin

ACGIH - STEL: 10 mg/m³ - Notes: (I, H), A4 - URT irr

ACGIH - TWA(8h): 25 ppm - STEL: 50 ppm - Notes: (V), A4 - URT irr

1-methoxy-2-propanol - CAS: 107-98-2

EU - TWA(8h): 375 mg/m³, 100 ppm - STEL: 563 mg/m³, 150 ppm - Notes: Skin

ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notes: A4 - Eye and URT irr

DNEL Exposure Limit Values

Isopropyl alcohol - CAS: 67-63-0

Worker Professional: 888 mg/kg - Consumer: 319 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated)

Worker Professional: 500 mg/m³ - Consumer: 89 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated)

Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term (repeated)

ethanediol - CAS: 107-21-1

Worker Industry: 35 mg/m³ - Worker Professional: 35 mg/m³ - Consumer: 7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 106 mg/kg - Worker Professional: 106 mg/kg - Consumer: 53 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

1-methoxy-2-propanol - CAS: 107-98-2

Consumer: 3.3 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 369 mg/m³ - Consumer: 43.9 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 50 mg/kg - Consumer: 18.1 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 50 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

PNEC Exposure Limit Values

Isopropyl alcohol - CAS: 67-63-0

Target: Fresh Water - Value: 140.9 mg/l

Target: Fresh Water - Value: 140.9 mg/l

Target: Freshwater sediments - Value: 552 mg/l

Target: Soil (agricultural) - Value: 28 mg/kg

Target: Microorganisms in sewage treatments - Value: 2251 mg/l

ethanediol - CAS: 107-21-1

Target: Fresh Water - Value: 10 mg/l

Target: 08 - Value: 10 mg/l

Target: Marine water - Value: 1 mg/l

Target: 09 - Value: 199.5 mg/l

Target: Freshwater sediments - Value: 3.7 mg/kg

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1-methoxy-2-propanol - CAS: 107-98-2

Target: Fresh Water - Value: 10 mg/l

Target: Freshwater sediments - Value: 100 mg/l

Target: Marine water - Value: 1 mg/l

Target: Marine water sediments - Value: 5.2 mg/kg

Target: Soil (agricultural) - Value: 5.49 mg/l

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Liquid Blue	--	--
Odour:	Characteristic	--	--
Odour threshold:	N.A.	--	--
pH:	N.A.	--	--
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	85°C	--	--
Flash point:	12°C	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	N.A.	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	N.A.	--	--
Vapour density:	N.A.	--	--
Relative density:	0.79 g/cm ³	--	--
Solubility in water:	Soluble	--	--

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Solubility in oil:	N.A.	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

NA=not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with dithiocarbamates, mercaptans and other organic sulphides, elementary metals (alkalis, alkaline earth, powder alloys, vapours), and powerful reducing agents.

It may generate toxic gases on contact with inorganic fluorides, halogenated organic substances, sulphides, nitrides, nitriles, organophosphates, and powerful oxidising agents. It may catch fire on contact with dithiocarbamates, elementary metals (alkali, alkaline earth, powder alloys, vapours, sheets or bars), and nitrides.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

DE- ICE ML 500

a) acute toxicity

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Based on available data, the classification criteria are not met
b) skin corrosion/irritation

Based on available data, the classification criteria are not met
c) serious eye damage/irritation
The product is classified: Eye Irrit. 2 H319
d) respiratory or skin sensitisation

Based on available data, the classification criteria are not met
e) germ cell mutagenicity

Based on available data, the classification criteria are not met
f) carcinogenicity

Based on available data, the classification criteria are not met
g) reproductive toxicity

Based on available data, the classification criteria are not met
h) STOT-single exposure
The product is classified: STOT SE 3 H336
i) STOT-repeated exposure

Based on available data, the classification criteria are not met
j) aspiration hazard

Based on available data, the classification criteria are not met
Toxicological information of the main substances found in the product:

Isopropyl alcohol - CAS: 67-63-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 10000 Ppm - Duration: 6h

ethanediol - CAS: 107-21-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 7712 mg/kg

Test: LD50 - Route: Skin - Species: Mouse > 3500 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 2.5 mg/l - Duration: 4h

Test: LD50 - Route: Skin - Species: Rabbit = 2000 mg/kg

g) reproductive toxicity:

Test: NOAEL(C) - Species: Mouse 1000 mg/kg

i) STOT-repeated exposure:

Test: NOAEL(C) - Route: Skin - Species: CANE 2200-4400 mg/kg - Source: OECD 410 -

Notes: Organo bersaglio/Target organ: Rene/kidney

1-methoxy-2-propanol - CAS: 107-98-2

a) acute toxicity:

Test: LD50 - Route: Oral 5300 mg/kg

Test: LD50 - Route: Skin 13000 mg/kg

Test: LD50 - Route: Inhalation 54.6 mg/l - Duration: 4h

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Isopropyl alcohol - CAS: 67-63-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 4200 mg/l - Duration h: 96

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Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 48
Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72

ethanediol - CAS: 107-21-1

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 72860 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae 6500-13000 mg/l - Duration h: 96

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish 15380 mg/l - Duration h: 168

1-methoxy-2-propanol - CAS: 107-98-2

a) Aquatic acute toxicity:

12.2. Persistence and degradability

None

Isopropyl alcohol - CAS: 67-63-0

Biodegradability: Readily biodegradable - Duration: .10gg - %: 70

1-methoxy-2-propanol - CAS: 107-98-2

Biodegradability: Readily biodegradable

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



14.1. UN number

ADR-UN Number: 1219

IATA-UN Number: 1219

IMDG-UN Number: 1219

14.2. UN proper shipping name

ADR-Shipping Name: ISOPROPANOL (ISOPROPYL ALCOHOL)

ADR-Shipping Name: ISOPROPANOL SOLUTION

IATA-Shipping Name: ISOPROPANOL (ISOPROPYL ALCOHOL)

IMDG-Shipping Name: ISOPROPANOL (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es)

ADR-Class: 3

ADR - Hazard identification number: 33

IATA-Class: 3

IATA-Label: 3

IMDG-Class: 3

Sea (IMO): 3 UN 1219

14.4. Packing group

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- | | |
|---------------------|----|
| ADR-Packing Group: | II |
| IATA-Packing group: | II |
| IMDG-Packing group: | II |
- 14.5. Environmental hazards
- | | |
|------------------------------|----|
| ADR-Environmental Pollutant: | No |
| IMDG-Marine pollutant: | No |
- 14.6. Special precautions for user
- | | |
|---|-------------|
| ADR-Subsidiary hazards: | - |
| ADR-S.P.: | 601 |
| ADR-Transport category (Tunnel restriction code): | 2 (D/E) |
| IATA-Passenger Aircraft: | 353 |
| IATA-Subsidiary hazards: | - |
| IATA-Cargo Aircraft: | 364 |
| IATA-S.P.: | A180 |
| IATA-ERG: | 3L |
| IMDG-EmS: | F-E,
S-D |
| IMDG-Subsidiary hazards: | - |
| IMDG-Stowage and handling: | Category B |
| IMDG-Segregation: | - |
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
- No
- Limited Quantity: 1 L
- Exempted Quantity: E2

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- Dir. 98/24/EC (Risks related to chemical agents at work)
- Dir. 2000/39/EC (Occupational exposure limit values)
- Regulation (EC) n. 1907/2006 (REACH)
- Regulation (EC) n. 1272/2008 (CLP)
- Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
- Regulation (EU) 2015/830
- Regulation (EU) n. 286/2011 (ATP 2 CLP)
- Regulation (EU) n. 618/2012 (ATP 3 CLP)
- Regulation (EU) n. 487/2013 (ATP 4 CLP)
- Regulation (EU) n. 944/2013 (ATP 5 CLP)
- Regulation (EU) n. 605/2014 (ATP 6 CLP)
- Regulation (EU) n. 2015/1221 (ATP 7 CLP)
- Regulation (EU) n. 2016/918 (ATP 8 CLP)
- Regulation (EU) n. 2016/1179 (ATP 9 CLP)
- Regulation (EU) n. 2017/776 (ATP 10 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
- Restrictions related to the product:
- Restriction 3
- Restriction 40
- Restrictions related to the substances contained:
- No restriction.
- Volatile Organic compounds - VOCs = 99.80 %
- Volatile Organic compounds - VOCs = 997.99 g/Kg
- Volatile Organic compounds - VOCs = 788.41 g/l
- Where applicable, refer to the following regulatory provisions :
- Directive 2012/18/EU (Seveso III)
- Regulation (EC) nr 648/2004 (detergents).
- Dir. 2004/42/EC (VOC directive)

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Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
Product belongs to category: P5c

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out for the mixture.
Substances for which a Chemical Safety Assessment has been carried out:
None

SECTION 16: Other information

Text of phrases referred to under heading 3:
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H302 Harmful if swallowed.
H373 May cause damage to organs (kidneys) through prolonged or repeated exposure if swallowed.
H226 Flammable liquid and vapour.

Hazard class and hazard category	Code	Description
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2

Paragraphs modified from the previous revision:

SECTION 3: Composition/information on ingredients
SECTION 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 14: Transport information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Flam. Liq. 2, H225	On basis of test data
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H336	Calculation method

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This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
NA:	Not applicable
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.