



**Safety Data Sheet dated 12/5/2017, version 6**

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

- 1.1. Product identifier  
Trade name: SANATON LIQUIDO
- 1.2. Relevant identified uses of the substance or mixture and uses advised against  
Recommended use:  
FOR PROFESSIONAL USE
- 1.3. Details of the supplier of the safety data sheet  
Company:  
Esseco S.r.l. Via San Cassiano 99  
28069 - Trecale (NO)  
Italy
- Enartis - Phone n. +39-0321-790300  
Competent person responsible for the safety data sheet: vino@enartis.it
- 1.4. Emergency telephone number  
Enartis - Phone n. +39-0321-790300

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**SECTION 2: Hazards identification**

- 2.1. Classification of the substance or mixture  
EC regulation criteria 1272/2008 (CLP)
- ⚠ Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.
  - ⚠ Danger, Eye Dam. 1, Causes serious eye damage.
- Adverse physicochemical, human health and environmental effects:  
No other hazards
- 2.2. Label elements  
Hazard pictograms:
- 
- Danger  
Hazard statements:  
H314 Causes severe skin burns and eye damage.
- Precautionary statements:  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
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 doctor.
- Special Provisions:  
None
- Contains  
Sodium Hydroxide; Caustic Soda
- 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:

Qty	Name	Ident. Number	Classification
>= 40% - < 50%	Sodium Hydroxide; Caustic Soda	Index number: 011-002-00-6 CAS: 1310-73-2 EC: 215-185-5 REACH No.: 01-2119457892-27-XXXX	⚠ 3.2/1A Skin Corr. 1A H314
>= 0.5% - < 1%	Sodium Chlorite	CAS: 7758-19-2 EC: 231-836-6	⚠ 2.13/1 Ox. Liq. 1 H271 ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.9/2 STOT RE 2 H373 ⚠ 4.1/A1 Aquatic Acute 1 H400 4.1/C3 Aquatic Chronic 3 H412 EUH032
950 ppm	sodium hypochlorite, solution 8 % Cl active	Index number: 017-011-00-1 CAS: 7681-52-9 EC: 231-668-3	⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 4.1/A1 Aquatic Acute 1 H400 EUH031

### 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.

**OBTAIN IMMEDIATE MEDICAL ATTENTION.**

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:

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

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## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

### 5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

### 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.

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## **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

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

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## **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.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

Store the product in original container, do not mix with other products. Store away from incompatible materials such as light metals, alkali metals, organic materials. It reacts with halogens, nitrates, magnesium, azides.

Instructions as regards storage premises:

Adequately ventilated premises.

### 7.3. Specific end use(s)

None in particular

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Sodium Hydroxide; Caustic Soda - CAS: 1310-73-2

OSHA - TWA: 2 mg/m<sup>3</sup>

ACGIH - STEL: Ceiling 2 mg/m<sup>3</sup> - Notes: URT, eye, and skin irr

sodium hypochlorite, solution 8 % Cl active - CAS: 7681-52-9

TLV STEL - (15 min) 1.5mg/m<sup>3</sup>, 0.5ppm

### DNEL Exposure Limit Values

Sodium Hydroxide; Caustic Soda - CAS: 1310-73-2

Worker Professional: 1 ppm - Exposure: Human Inhalation - Frequency: Long Term, local effects

Consumer: 1 ppm - Exposure: Human Inhalation - Frequency: Long Term, local effects

Sodium Chlorite - CAS: 7758-19-2

Worker Professional: 0.58 mg/kg - Consumer: 0.29 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 0.41 mg/m<sup>3</sup> - Consumer: 0.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 0.02 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

sodium hypochlorite, solution 8 % Cl active - CAS: 7681-52-9

Worker Professional: 1.55 mg/m<sup>3</sup> - Consumer: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 1.55 mg/m<sup>3</sup> - Consumer: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 3.1 mg/m<sup>3</sup> - Consumer: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Professional: 3.1 mg/m<sup>3</sup> - Consumer: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

### PNEC Exposure Limit Values

Sodium Chlorite - CAS: 7758-19-2

Target: Fresh Water - Value: 0.65 Sg/l

Target: Marine water - Value: 0.06 Sg/l

sodium hypochlorite, solution 8 % Cl active - CAS: 7681-52-9

Target: Fresh Water - Value: 0.21 ppb

Target: Marine water - Value: 0.042 ppb

### 8.2. Exposure controls

#### Eye protection:

Eye glasses with side protection.

#### Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

#### Protection for hands:

Use protective gloves that provides comprehensive protection.

Suitable material:

UNI EN 420/UNI EN 374

#### Respiratory protection:

Not needed for normal use.

#### Thermal Hazards:

None

#### Environmental exposure controls:

None

#### Appropriate engineering controls:

None

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance and colour: Liquid

SNTNL2(0517)6

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Odour:	Characteristic
Odour threshold:	N.A.
pH:	12,5
Melting point / freezing point:	± -5°C
Initial boiling point and boiling range:	± 100°C
Solid/gas flammability:	>100°C
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	N.A.
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	±1.340 g/mL
Solubility in water:	100%
Solubility in oil:	0%
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

Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions  
 Contact with acids liberates chlorine, toxic gas  
 It reacts with strong acids

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

Danger due to exothermic reactions. May be corrosive to metals.  
 It can generate flammable gases in contact with elemental metals

### 10.4. Conditions to avoid

Acids

### 10.5. Incompatible materials

See section 7.

### 10.6. Hazardous decomposition products

Chlorine, hypochlorous acid, sodium chloride.

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Toxicological information of the product:

SANATON LIQUIDO

#### a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

#### b) skin corrosion/irritation

The product is classified: Skin Corr. 1A H314

#### c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

#### d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

- e) germ cell mutagenicity  
Not classified  
Based on available data, the classification criteria are not met
- f) carcinogenicity  
Not classified  
Based on available data, the classification criteria are not met
- g) reproductive toxicity  
Not classified  
Based on available data, the classification criteria are not met
- h) STOT-single exposure  
Not classified  
Based on available data, the classification criteria are not met
- i) STOT-repeated exposure  
Not classified  
Based on available data, the classification criteria are not met
- j) aspiration hazard  
Not classified  
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

Sodium Hydroxide; Caustic Soda - CAS: 1310-73-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rabbit = 325 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 1350 mg/kg

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive

Test: Eye Corrosive - Species: Rabbit Positive

d) respiratory or skin sensitisation:

Test: Respiratory Sensitization - Route: Inhalation Negative

Test: Skin Sensitization - Route: Skin Negative

Sodium Chlorite - CAS: 7758-19-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Mouse = 390 mg/kg

Test: NOAEL - Route: Oral > 32.1 mg/kg - Notes: 85 weeks

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

Test: NOAEL - Route: Skin > 57.14 mg/kg - Notes: 51 weeks

b) skin corrosion/irritation:

Test: Eye Corrosive - Route: Skin Positive

sodium hypochlorite, solution 8 % Cl active - CAS: 7681-52-9

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 10500 mg/m<sup>3</sup>

Test: LD50 - Route: Oral - Species: Rat = 1100 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin Positive

Test: Eye Irritant - Route: Skin Positive

d) respiratory or skin sensitisation:

Test: Respiratory Tract Irritant - Route: Inhalation Positive

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## SECTION 12: Ecological information

### 12.1. Toxicity

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

SANATON LIQUIDO

Not classified for environmental hazards

Based on available data, the classification criteria are not met

Sodium Hydroxide; Caustic Soda - CAS: 1310-73-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 189 mg/l - Duration h: 96  
 Endpoint: EC50 - Species: Bacteria = 22 mg/l - Notes: 15 min (Photobacterium phosphoreum) (EU, 2007; OECD, 2002)

b) Aquatic chronic toxicity:

Endpoint: EC50 - Species: Daphnia = 40.4 mg/l - Duration h: 48

Sodium Chlorite - CAS: 7758-19-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 106 mg/l - Duration h: 96 - Notes: Oncorhynchus mykiss

Endpoint: LC50 - Species: Fish = 105 mg/l - Duration h: 96 - Notes: Cyprinodon variegatus

Endpoint: EC50 - Species: Daphnia = 1 mg/l - Duration h: 48 - Notes: Daphnia magna

Endpoint: EC50 = 0.65 mg/l - Duration h: 96 - Notes: Mysidopsis bahia

Endpoint: EC50 - Species: Algae = 1 mg/l - Duration h: 96 - Notes: Selenastrum capricornutum

sodium hypochlorite, solution 8 % Cl active - CAS: 7681-52-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 0.06 mg/l - Duration h: 96 - Notes: Soft water

Endpoint: EC50 - Species: Daphnia = 0.141 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 0.032 mg/l - Duration h: 96 - Notes: Sea water

Endpoint: EC50 - Species: Algae = 0.04 mg/l

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae = 0.017 mg/l

Endpoint: NOEC - Species: Fish = 0.04 mg/l

Endpoint: NOEC - Species: Algae = 0.0021 mg/l - Notes: Soft water

12.2. Persistence and degradability

N.A.

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: 1719

IATA-UN Number: 1719

IMDG-UN Number: 1719

14.2. UN proper shipping name

ADR-Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S.(sodium hydroxide; caustic soda, sodium hypochlorite, solution 8 % Cl active)

ADR-Shipping Name: UN 1719 LIQUIDO ALCALINO CAUSTICO N.A.S. (Idrossido di sodio)

IATA-Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S.(sodium hydroxide; caustic



- soda, sodium hypochlorite, solution 8 % Cl active)
- IMDG-Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S.(sodium hydroxide; caustic soda, sodium hypochlorite, solution 8 % Cl active)
- IMDG-Technical name: UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide)
- 14.3. Transport hazard class(es)
- |             |    |
|-------------|----|
| ADR-Class:  | 8  |
| ADR-Label:  | II |
| IATA-Class: | 8  |
| IMDG-Class: | 8  |
| IMDG-Class: | 8  |
- 14.4. Packing group
- |                     |    |
|---------------------|----|
| 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
- |   |   |
|---|---|
| Rail (RID):                                       | 8   |
| ADR-Subsidiary risks:                             | -   |
| ADR-S.P.:   | 274   |
| ADR-Transport category (Tunnel restriction code): | 2 (E)   |
| IATA-Passenger Aircraft:                          | 851   |
| IATA-Subsidiary risks:                            | -   |
| IATA-Cargo Aircraft:                              | 855   |
| IATA-S.P.:  | A3 A803   |
| IATA-ERG:   | 8L  |
| IMDG-EmS:   | F-A , S-B   |
| IMDG-Subsidiary risks:                            | -   |
| IMDG-Stowage and handling:                        | Category A  |
| IMDG-Segregation:                                 | "Separated from" acids. "Away from" ammonium salts. |
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code  
N.A.

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## 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)
- 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
- Restrictions related to the substances contained:
- No restriction.
- 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)

Provisions related to directive EU 2012/18 (Seveso III):  
Seveso III category according to Annex 1, part 1  
None

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

Full text of phrases referred to in Section 3:

H314 Causes severe skin burns and eye damage.  
H271 May cause fire or explosion; strong oxidiser.  
H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.  
EUH032 Contact with acids liberates very toxic gas.  
EUH031 Contact with acids liberates toxic gas.

Hazard class and hazard category	Code	Description
Ox. Liq. 1	2.13/1	Oxidising liquid, Category 1
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Paragraphs modified from the previous revision:

SECTION 2: Hazards identification  
SECTION 3: Composition/information on ingredients  
SECTION 4: First aid measures  
SECTION 7: Handling and storage  
SECTION 8: Exposure controls/personal protection  
SECTION 9: Physical and chemical properties  
SECTION 10: Stability and reactivity  
SECTION 11: Toxicological information  
SECTION 12: Ecological information  
SECTION 14: Transport information  
SECTION 15: Regulatory information

**SECTION 16: Other information**

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

<b>Classification according to Regulation (EC) Nr. 1272/2008</b>	<b>Classification procedure</b>
Skin Corr. 1A, H314	On basis of test data (pH)
Eye Dam. 1, H318	On basis of test data (pH)

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.
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.
N.A.:	Not Available
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.