



Safety Data Sheet dated 10/12/2018, version 2

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

1.1. Product identifier

Mixture identification:

Trade name: BIOCHLOR

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

Identified use:

Medical Surgery Presidium. Registration of the Ministry of Health n.19916. Concentrated disinfectant solution titrated in free chlorine, intended for disinfection by Gram positive and Gram negative bacteria including Legionella spp. of hot water circuits, cooling towers and the food industry, animal feed and agro-zootechnics.

Uses advised against:

Any other use different from the identified uses.

1.3. Details of the supplier of the safety data sheet

Company:

BARCHEMICALS SRL  
VIA S.ALLENDE 14  
CASTELNUOVO RANGONE (MO)  
ITALY  
PHONE. +39 059/536502  
FAX. +39 059/536742  
www.barchemicals.it

Competent person responsible for the safety data sheet:

barani.corrado@barchemicals.it


1.4. Emergency telephone number


Barani Dr.Corrado - MOBILE PHONE. +39 335/6109383


**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

EC regulation criteria n°1272/2008 (CLP)

 Warning, Met. Corr. 1, May be corrosive to metals.

 Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.

 Danger, Eye Dam. 1, Causes serious eye damage.

 Warning, Aquatic Acute 1, Very toxic to aquatic life.

EUH031 Contact with acids liberates toxic gas.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



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Danger

Hazard statements:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

Precautionary statements:

P102 Keep out of reach of children.

P273 Avoid release to the environment.

P280 Wear protective gloves and eye/face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353+P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a doctor.

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.

P310 Immediately call a POISON CENTER.

Special Provisions:

EUH031 Contact with acids liberates toxic gas.

EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

Contains

sodium hypochlorite, solution ... % Cl active

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

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**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
>= 5% - < 10%	Sodium chloride	CAS: 7647-14-5 EC: 231-598-3	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
>= 3% - < 5%	sodium hypochlorite, solution ... % Cl active	Index number: 017-011-00-1 CAS: 7681-52-9 EC: 231-668-3 REACH No.: 01-21194881 54-34	 2.16/1 Met. Corr. 1 H290  3.2/1B Skin Corr. 1B H314  3.3/1 Eye Dam. 1 H318  4.1/A1 Aquatic Acute 1 H400  4.1/C2 Aquatic Chronic 2 H411 EUH031
< 1%	sodium hydroxide; caustic soda	Index number: 011-002-00-6 CAS: 1310-73-2 EC: 215-185-5	 2.16/1 Met. Corr. 1 H290  3.2/1A Skin Corr. 1A H314  3.3/1 Eye Dam. 1 H318

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		REACH No.: 01-21194578 92-27	
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#### **SECTION 4: First aid measures**

##### 4.1. Description of first aid measures

In case of skin contact:

After contact with skin, wash immediately with soap and plenty of water.  
Remove contaminated clothing immediately and dispose off safely.

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:

Rinse well your mouth  
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.  
In case of breathing difficult, bring the injured person into the open air and store it in a comfortable position for breathing. Consult a physician.  
If breathing is irregular or stopped, administer artificial respiration.

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

Contact with the skin produces redness, burning and pain.  
After contact with the eyes produces redness and pain.  
If inhaled it can cause the following symptoms: cough, labored breathing, sore throat and difficulty breathing.  
In case of accidental ingestion, it can cause abdominal pain and vomiting.

##### 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:  
In case of contact with eyes, rinse immediately for at least 15 minutes under running water with eyelids held open, consult an eye specialist.  
If swallowed, rinse mouth. Consult a doctor as soon as possible.  
After contact with skin, wash immediately with plenty of soap and water.  
In case of inhalation of fumes move the person from the contaminated area; if breathing is irregular or stops, administer artificial respiration. Consult a doctor as soon as possible.

#### **SECTION 5: Firefighting measures**

##### 5.1. Extinguishing media

Suitable extinguishing media:  
Full jet water.  
Water spray, alcohol resistant foam and dry chemicals.  
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.  
Combustion of the product produces chlorine gas.  
Burning produces heavy smoke.

##### 5.3. Advice for firefighters

Immediately isolate the area by removing all persons from the area of the accident in the event of a fire. No action shall be taken involving any personal risk or without proper training.  
Firefighters must wear protective equipment and self-contained breathing apparatus (SCBA) with a full-face mask on the working face at positive pressure. Fire extinguishers (including

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helmets, protective boots and gloves) conforming to European Standard EN469 will provide basic protection for chemical accidents.

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**SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate the surrounding areas.  
Remove persons to safety.  
Prevent entry of foreign and unprotected personnel.  
Do not touch or walk on spilled material.  
Avoid breathing vapors or mists.  
Provide adequate ventilation.  
Wear personal protection equipment.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
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.  
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  
Retain contaminated washing water and dispose it.

6.3. Methods and material for containment and cleaning up

In case of a liquid product, hold and absorb the spillage with inert absorbent material (eg, sand, earth, vermiculite, fossil flour). Store contaminated material in suitable containers and start waste disposal. After collection, rinse the area and the materials with water by retrieving the water used and, if necessary, dispose of it in authorized plants.

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

Store at room temperature and away from direct sunlight.  
Keep away from food, drink and feed.  
Incompatible materials:  
Keep away from acids.  
Instructions as regards storage premises:  
Adequately ventilated premises.

7.3. Specific end use(s)

See section 1.2.

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

8.1. Control parameters

sodium hydroxide; caustic soda - CAS: 1310-73-2  
ACGIH - STEL: Ceiling 2 mg/m<sup>3</sup> - Notes: URT, eye, and skin irr

DNEL Exposure Limit Values

sodium hypochlorite, solution ... % Cl active - CAS: 7681-52-9  
Worker Professional: 3.10 03 - Consumer: 3.10 03 - Exposure: Human Inhalation -  
Frequency: Short Term, systemic effects - Endpoint: Repeated dose toxicity

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Worker Professional: 1.55 03 - Consumer: 1.55 03 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects - Endpoint: Repeated dose toxicity  
Worker Professional: 3.10 03 - Consumer: 3.10 03 - Exposure: Human Inhalation - Frequency: Short Term, local effects - Endpoint: Repeated dose toxicity  
Worker Professional: 1.55 03 - Consumer: 1.55 03 - Exposure: Human Inhalation - Frequency: Long Term, local effects - Endpoint: Repeated dose toxicity

mg/kg  
sodium hydroxide; caustic soda - CAS: 1310-73-2

Worker Professional: 1 03 - Consumer: 1 03 - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Professional: 1 03 - Consumer: 1 03 - Exposure: Human Inhalation - Frequency: Long Term, local effects

**PNEC Exposure Limit Values**

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

Target: Fresh Water - Value: 0.00021 mg/l

Target: Marine water - Value: 0.000042 mg/l

Target: Microorganisms in sewage treatments - Value: 0.03 mg/l

Target: Occasional issue. - Value: 0.000260 mg/l

Target: Air - Value: 11.1 mg/l

**8.2. Exposure controls**

Eye/face protection:

Basket eye glasses.

Protection for skin:

Chemical protection clothing.

Protection for hands:

Gloves resistant to chemicals. EN 374

Respiratory protection:

Full face mask with a chlorine filter.

Thermal Hazards:

Not applicable (the product is handled at room temperature)

Environmental exposure controls:

Do not allow the product to be absorbed from the soil or from entering waterways or sewers. Do not let product enter drains. Discharge into the environment must be avoided.

The product is toxic to the aquatic environment.

Appropriate engineering controls:

Ensure adequate ventilation. Comply with the maximum concentration values in the workplace.

Predict the presence of showers and eye wash fountains at the workplace.

**SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Liquid Clear Giallino	--	--
Odour:	Mild chlorine	--	--
Odour threshold:	Not Available	--	--
pH:	12,6	--	--
Melting point / freezing point:	Not applicable	--	--
Initial boiling point and boiling range:	Not Available	--	--
Flash point:	Not applicable	--	--
Evaporation rate:	Not Available	--	--
Solid/gas flammability:	Not applicable	--	--

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Upper/lower flammability or explosive limits:	Not applicable	--	--
Vapour pressure:	Not Available	--	--
Vapour density:	Not Available	--	--
Relative density:	1.11 Kg/l	--	--
Solubility in water:	Complete	--	--
Solubility in oil:	Not Available	--	--
Partition coefficient (n-octanol/water):	Not Available	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	Not applicable	--	--
Viscosity:	Not Available	--	--
Explosive properties:	Prodotto non esplosivo	--	--
Oxidizing properties:	Produced with oxidizing properties	--	--

**9.2. Other information**

Properties	Value	Method:	Notes:
Miscibility:	Not Available	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	Not Available	--	--
Substance Groups relevant properties	N.A.	--	--

**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

Stable under normal conditions.

**10.2. Chemical stability**

Stable under recommended storage and handling. Please refer to section 7 of the MSDS.

**10.3. Possibility of hazardous reactions**

Do not mix with products containing chlorine or reducing products.

**10.4. Conditions to avoid**

Stable under normal conditions.

**10.5. Incompatible materials**

organic substances.

**10.6. Hazardous decomposition products**

None under normal conditions of storage and use.

**SECTION 11: Toxicological information**
**11.1. Information on toxicological effects**

Toxicological information of the product:

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**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**

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- 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 hypochlorite, solution ... % Cl active - CAS: 7681-52-9
- a) acute toxicity:  
Test: LD50 - Route: Oral - Species: Rat > 1100 mg/kg - Source: Pubblicazione 1977 (ECHA)  
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg  
Test: LC50 - Route: Inhalation - Species: Rat > 10.5 mg/l - Duration: 1h - Source: Study report 1962 (ECHA) - Notes: Oecd Guideline 403 (Acute inhalation Toxicity)
- e) germ cell mutagenicity:  
Test: Mutagenesis - Species: Rat Negative
- f) carcinogenicity:  
Test: Carcinogenicity - Species: Rat Negative
- sodium hydroxide; caustic soda - CAS: 1310-73-2
- a) acute toxicity:  
Test: LD50 - Route: Skin - Species: Rabbit = 1350 mg/kg - Source: IUCLID
- b) skin corrosion/irritation:  
Test: Skin Corrosive - Route: Skin - Species: Rabbit Yes - Source: JACOBS G 1990 (ECHA) - Notes: OECD GUIDELINE 404 (ACUTE DERMAL IRRITATION / CORROSION)
- d) respiratory or skin sensitisation:  
Test: Skin Sensitization No - Source: PARK 1995 (ECHA)
- e) germ cell mutagenicity:  
Test: Genotoxicity No - Source: MORITA 1989 (ECHA) - Notes: MAMMALIAN CELL GENE MUTATION ASSAY

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## **SECTION 12: Ecological information**

### 12.1. Toxicity

No information is available on the mixture as a whole. This is the information on eco-toxicological effects of the individual components.

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The product is classified: Aquatic Acute 1 - H400  
sodium hypochlorite, solution ... % Cl active - CAS: 7681-52-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 0.060 mg/l - Duration h: 96 - Notes: ECHA

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- Endpoint: EC50 - Species: Daphnia = 0.05 mg/l - Duration h: 48  
Endpoint: IC50 - Species: Algae = 0.3 mg/l - Duration h: 96  
sodium hydroxide; caustic soda - CAS: 1310-73-2  
a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 45 mg/l - Duration h: 96 - Notes: ECHA  
Endpoint: EC50 - Species: Daphnia = 40 mg/l - Duration h: 48 - Notes: ECHA
- 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

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**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.

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**SECTION 14: Transport information**



- 14.1. UN number  
ADR-UN Number: 1903  
IATA-UN Number: 1903  
IMDG-UN Number: 1903
- 14.2. UN proper shipping name  
ADR-Shipping Name: DISINFECTANT, LIQUID, CORROSIVE, N.O.S.(sodium hypochlorite, solution ... % Cl active, sodium hydroxide; caustic soda)  
IATA-Shipping Name: DISINFECTANT, LIQUID, CORROSIVE, N.O.S.(sodium hypochlorite, solution ... % Cl active, sodium hydroxide; caustic soda)  
IMDG-Shipping Name: DISINFECTANT, LIQUID, CORROSIVE, N.O.S.(sodium hypochlorite, solution ... % Cl active, sodium hydroxide; caustic soda)
- 14.3. Transport hazard class(es)  
ADR-Class: 8  
ADR - Hazard identification number: 80  
IATA-Class: 8  
IATA-Label: 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: Yes

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- IMDG-Marine pollutant: Marine Pollutant  
Most important toxic component: sodium hypochlorite, solution ... % Cl active
- 14.6. Special precautions for user
- 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 B  
IMDG-Segregation: -
- 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)  
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

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

Product belongs to category: E1

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

### For professional use.

Full text of phrases referred to in Section 3:

- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.
- EUH031 Contact with acids liberates toxic gas.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
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
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

Paragraphs modified from the previous revision:

- SECTION 2: Hazards identification
- SECTION 12: Ecological information
- SECTION 16: Other 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
Met. Corr. 1, H290	On basis of test data
Skin Corr. 1A, H314	On basis of test data (pH)
Eye Dam. 1, H318	On basis of test data (pH)
Aquatic Acute 1, H400	Calculation method

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

Liability exclusion clause: 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.

For professional use.

ADR: European Agreement concerning the International Carriage of

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	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.
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.