



Safety Data Sheet dated 27/4/2020, version 3

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

1.1. Product identifier

Mixture identification:

Trade name: BIOCHLOR  
Trade code: 860202016PP

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

Identified use:

Chlorine oxides activated for the treatment of sanitary water.

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)

 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.

 Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

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H314 Causes severe skin burns and eye damage.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/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 POISON CENTER/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 POISON CENTER/doctor/...  
P391 Collect spillage.

Special Provisions:

None

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









### 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
>= 25% - < 30%	sodium hypochlorite, solution... % Cl active	Index number: 017-011-00-1 CAS: 7681-52-9 EC: 231-668-3 REACH No.: 01-2119488154-34	 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
>= 0.25% - < 1%	sodium hydroxide; caustic soda	Index number: 011-002-00-6 CAS: 1310-73-2 EC: 215-185-5 REACH No.: 01-2119457892-27	 2.16/1 Met. Corr. 1 H290  3.2/1A Skin Corr. 1A H314  3.3/1 Eye Dam. 1 H318

### 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.

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Remove contaminated clothing immediately and dispose off safely.

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

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.

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.

Do NOT induce vomiting.

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.

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

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.

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## **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.

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.

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

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

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

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.

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. 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.

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

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.

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.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

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- 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  
Store at room temperature and away from direct sunlight.  
Keep away from food, drink and feed.  
Incompatible materials:  
None in particular.  
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  
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:  
Eye glasses with side protection. EN166  
Protection for skin:  
Chemical protection clothing.  
Protection for hands:  
Gloves resistant to chemicals. EN 374  
Respiratory protection:  
Not necessary in normal use.  
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.  
Appropriate engineering controls:

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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:	Liquido Limpido Giallino	--	--
Odour:	Lieve di cloro	--	--
Odour threshold:	Non Disponibile	--	--
pH:	11.5	--	--
Melting point / freezing point:	Non Applicabile	--	--
Initial boiling point and boiling range:	Non Disponibile	--	--
Flash point:	Non Applicabile	--	--
Evaporation rate:	Non Disponibile	--	--
Solid/gas flammability:	Non Applicabile	--	--
Upper/lower flammability or explosive limits:	Non Applicabile	--	--
Vapour pressure:	Non Disponibile	--	--
Vapour density:	Non Disponibile	--	--
Relative density:	1.11 Kg/l	--	--
Solubility in water:	Completa	--	--
Solubility in oil:	Non Disponibile	--	--
Partition coefficient (n-octanol/water):	Non Disponibile	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	Non Applicabile	--	--
Viscosity:	Non Disponibile	--	--
Explosive properties:	Prodotto non esplosivo	--	--
Oxidizing properties:	Prodotto con proprietà ossidanti	--	--

### 9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Non Disponibile	--	--

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Fat Solubility:	N.A.	--	--
Conductivity:	Non Disponibile	--	--
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  
Exothermic reaction with strong acids.
- 10.4. Conditions to avoid  
Avoid direct sunlight.  
Do not mix with acids. It can be produced toxic gases (chlorine).
- 10.5. Incompatible materials  
Concentrated acids.  
Organic materials that can generate combustion.
- 10.6. Hazardous decomposition products  
Chlorine.

## 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

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

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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 ecotoxicological effects of the individual components.

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The product is classified: Aquatic Acute 1 - H400; Aquatic Chronic 2 - H411

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

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



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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: 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  
 IMDG-Marine pollutant: Marine Pollutant  
 Most important toxic component: sodium hypochlorite, solution... % Cl active
- 14.6. Special precautions for user  
 ADR-Subsidiary hazards: -  
 ADR-S.P.: 274  
 ADR-Transport category (Tunnel restriction code): 2 (E)  
 IATA-Passenger Aircraft: 851  
 IATA-Subsidiary hazards: -  
 IATA-Cargo Aircraft: 855  
 IATA-S.P.: A3 A803  
 IATA-ERG: 8L  
 IMDG-EmS: F-A , S-B  
 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  
 N.A.

## 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)
  - Regulation (EU) n. 2018/699 (ATP 11 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, E2

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,

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		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

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
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
Aquatic Chronic 2, H411	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 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.

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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.