acc. to Safe Work Australia - Code of Practice

## Sodium hypochlorite solution 12 % Cl, Biocide Grade, stabilized

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Replaces version of: 2021-09-09

Version: (GHS 4)

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

#### **Product identifier** 1.1

Identification of the substance **Sodium hypochlorite solution** 12 % Cl, Biocide

Grade, stabilized

Article number 0078

CAS number [7681-52-9]

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

Relevant identified uses: Biocidal product

Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for squirting or spraying. Do not use

for products which come into direct contact with the skin. Do not use for private purposes (house-

hold).

#### Details of the supplier of the safety data sheet 1.3

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 e-mail: sicherheit@carlroth.de Website: www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment

sheet:

e-mail (competent person):

sicherheit@carlroth.de

#### 1.4 **Emergency telephone number**

Name		Street	Postal code/city	Telephone	Website
NSW Poisons Information Childrens Hospital	Centre Haw	vkesbury Road	2145 West- mead, NSW	131126	

## **SECTION 2: Hazards identification**

#### Classification of the substance or mixture

## Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.16	Substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	Skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318

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## **Supplemental hazard information**

Code	Supplemental hazard information
EUH031	contact with acids liberates toxic gas

For full text of abbreviations: see SECTION 16

## The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

#### 2.2 Label elements

## Labelling

Signal word Danger

## **Pictograms**

GHS05



## **Hazard statements**

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

## **Precautionary statements**

## **Precautionary statements - prevention**

P260 Do not breathe dusts or mists P280 Wear eye protection/face protection

## **Precautionary statements - response**

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin

with water or shower

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P390 Absorb spillage to prevent material damage

## **Precautionary statements - disposal**

P501 Dispose of contents/container to industrial combustion plant

**Hazardous ingredients for labelling:** Sodium hypochlorite, solution ... % Cl active, Sodi-

um hydroxide

#### 2.3 Other hazards

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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## **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

not relevant (mixture)

#### 3.2 Mixtures

## **Description of the mixture**

Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Sodium hypochlorite, solution % Cl active	CAS No 7681-52-9	5 – 15	Acute Tox. 4 / H302 Skin Corr. 1B / H314 Eye Dam. 1 / H318 EUH031		B(a)
Sodium hydroxide	CAS No 1310-73-2	1-<3	Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318		

Notes

B(a): The classification refers to an aqueous solution

For full text of abbreviations: see SECTION 16

## **SECTION 4: First aid measures**

## 4.1 Description of first aid measures



#### **General notes**

Take off immediately all contaminated clothing. Self-protection of the first aider.

## **Following inhalation**

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

## **Following skin contact**

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

#### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

## Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Corrosion, Gastric perforation, Risk of serious damage to eyes, Risk of blindness, Cough, Dyspnoea

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

none

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# **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media



## Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

## Unsuitable extinguishing media

water jet

## 5.2 Special hazards arising from the substance or mixture

Non-combustible.

## **Hazardous combustion products**

In case of fire may be liberated: Hydrogen chloride (HCl), Chlorine (CI<sub>2</sub>)

## 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures



## For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

## 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains.

## Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

## Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

## 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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# SECTION 7: Handling and storage

## Precautions for safe handling

Handle and open container with care. Provide adequate ventilation. Clear contaminated areas thoroughly.

## Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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

Protect from sunlight. Keep only in original container.

## **Incompatible substances or mixtures**

Observe hints for combined storage.

#### Consideration of other advice:

## Specific designs for storage rooms or vessels

Do not keep the container sealed.

Recommended storage temperature: 15 – 25 °C

#### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

#### 8.1 **Control parameters**

#### **National limit values**

## **Occupational exposure limit values (Workplace Exposure Limits)**

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
AU	sodium hydroxide	1310-73- 2	WES						2		WES

#### Notation

Ceiling-C

TWA

Ceiling value is a limit value above which exposure should not occur

STEL

hours time-weighted average (unless otherwise specified)

Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8

## Relevant DNELs of components of the mixture

Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time		
Sodium hypochlor- ite, solution % Cl active	7681-52-9	DNEL	1.55 mg/ m³	human, inhalat- ory	worker (industry)	chronic - systemic effects		
Sodium hypochlor- ite, solution % Cl active	7681-52-9	DNEL	3.1 mg/m³	human, inhalat- ory	worker (industry)	acute - systemic effects		
Sodium hypochlor- ite, solution % Cl active	7681-52-9	DNEL	1.55 mg/ m³	human, inhalat- ory	worker (industry)	chronic - local ef- fects		

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Relevant DNELs of components of the mixture									
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time			
Sodium hypochlor- ite, solution % Cl active	7681-52-9	DNEL	3.1 mg/m <sup>3</sup>	human, inhalat- ory	worker (industry)	acute - local ef- fects			

Relevant PNECs of components of the mixture									
Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time			
Sodium hypochlor- ite, solution % Cl active	7681-52-9	PNEC	0.21 <sup>µg</sup> / <sub>l</sub>	aquatic organ- isms	freshwater	short-term (single instance)			
Sodium hypochlor- ite, solution % Cl active	7681-52-9	PNEC	0.042 <sup>µg</sup> / <sub>l</sub>	aquatic organ- isms	marine water	short-term (single instance)			
Sodium hypochlor- ite, solution % Cl active	7681-52-9	PNEC	4.69 <sup>mg</sup> / <sub>l</sub>	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)			

#### 8.2 Exposure controls

## Individual protection measures (personal protective equipment)

## **Eye/face protection**





Use safety goggle with side protection. Wear face protection.

## Skin protection





## hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

## • type of material

Butyl caoutchouc (butyl rubber)

#### material thickness

0,5 mm

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## breakthrough times of the glove material

>480 minutes (permeation: level 6)

## • Splash protection - Protective gloves

• type of material: NBR (Nitrile rubber)

• material thickness: >0,11 mm

breakthrough times of the glove material: >60 minutes (permeation: level 3)

## other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

## **Respiratory protection**





Respiratory protection necessary at: Aerosol or mist formation. Type: B-P2 (combined filters for acidic gases and particles, colour code: Grey/White).

## **Environmental exposure controls**

Keep away from drains, surface and ground water.

# **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

Physical state liquid

Colour light yellow - light green

Odour like: - chlorine

Melting point/freezing point -25 °C

Boiling point or initial boiling point and boiling

range

98 °C (slow decomposition)

Flammability non-combustible
Lower and upper explosion limit not determined
Flash point not determined
Auto-ignition temperature not determined

Decomposition temperature >111 °C

pH (value) 12 – 13 (20 °C)

Kinematic viscosity  $2.222 \,^{\text{mm}^2}$ /<sub>s</sub> at 20 °C Dynamic viscosity  $2.8 \,\text{mPa}$  s at 20 °C

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

Partition coefficient n-octanol/water (log value): -3.42 (20 °C)

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Vapour pressure 23 hPa

Density and/or relative density

Density 1.22 – 1.26 <sup>g</sup>/<sub>cm³</sub> at 20 °C

Relative vapour density information on this property is not available

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard

classes:

Corrosive to metals category 1: corrosive to metals

Other safety characteristics:

Miscibility completely miscible with water

# SECTION 10: Stability and reactivity

## 10.1 Reactivity

Substance or mixture corrosive to metals.

## 10.2 Chemical stability

May cause decomposition by long-term light influence.

## 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser, Formic acid, Amines, Ammonia (NH3), Acetic anhydride, Methanol, Reducing agents, Strong acid, Cyanides,

Dangerous/dangerous reactions with: Acids => Release of an acute toxic gas: Chlorine

## 10.4 Conditions to avoid

Keep away from heat. Decompostion takes place from temperatures above: >111 °C.

## 10.5 Incompatible materials

different metals

#### Release of flammable materials with

Metals, Light metals (due to the release of hydrogen in an acid/alkaline medium)

## Release of toxic materials with

Acids.

## 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

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# **SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

## **Classification procedure**

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## Classification acc. to GHS

## **Acute toxicity**

Shall not be classified as acutely toxic.

## Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Sodium hypochlorite, solution % Cl active	7681-52-9	oral	1,100 <sup>mg</sup> / <sub>kg</sub>

## Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Sodium hypochlorite, solution % Cl active	7681-52-9	oral	LD50	1,100 <sup>mg</sup> / <sub>kg</sub>	rat
Sodium hypochlorite, solution % Cl active	7681-52-9	dermal	LD50	>20,000 <sup>mg</sup> / <sub>kg</sub>	rabbit

## Skin corrosion/irritation

Causes severe skin burns and eye damage.

## Serious eye damage/eye irritation

Causes serious eye damage.

## Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

## **Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.

## Carcinogenicity

Shall not be classified as carcinogenic.

## **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

## Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

## Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

## **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

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## Symptoms related to the physical, chemical and toxicological characteristics

## • If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

## • If in eyes

causes burns, Causes serious eye damage, risk of blindness

## • If inhaled

cough, Dyspnoea

## • If on skin

causes severe burns, causes poorly healing wounds

## Other information

none

## 11.2 Endocrine disrupting properties

None of the ingredients are listed.

# **SECTION 12: Ecological information**

## 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (a	Aquatic toxicity (acute) of components of the mixture									
Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time					
Sodium hypochlorite, solution % Cl active	7681-52-9	EC50	35 <sup>µg</sup> / <sub>l</sub>	aquatic invertebrates	48 h					
Sodium hypochlorite, solution % Cl active	7681-52-9	ErC50	0.036 <sup>mg</sup> / <sub>I</sub>	algae	72 h					
Sodium hydroxide	1310-73-2	LC50	<180 <sup>mg</sup> / <sub>l</sub>	fish	96 h					
Sodium hydroxide	1310-73-2	EC50	40.4 <sup>mg</sup> / <sub>I</sub>	aguatic invertebrates	48 h					

Aquatic toxicity (chronic) of components of the mixture								
	Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time		
	Sodium hydroxide	1310-73-2	EC50	22 <sup>mg</sup> / <sub>l</sub>	microorganisms	15 min		

## **Biodegradation**

The methods for determining the biological degradability are not applicable to inorganic substances.

## 12.2 Process of degradability

Data are not available.

## 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

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## Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Sodium hypochlorite, solution % Cl active	7681-52-9		-3.42 (pH value: 12.5, 20 °C)	

## 12.4 Mobility in soil

Data are not available.

## 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

#### 12.7 Other adverse effects

Data are not available.

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

## Sewage disposal-relevant information

Do not empty into drains.

## Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

## Relevant provisions relating to waste(Basel Convention)

## Properties of waste which render it hazardous

**H8** Corrosives

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

# **SECTION 14: Transport information**

#### 14.1 UN number

UN 1791

IMDG-Code UN 1791 ICAO-TI UN 1791

## 14.2 UN proper shipping name

UN RTDGHYPOCHLORITE SOLUTIONIMDG-CodeHYPOCHLORITE SOLUTION

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	ICAO-TI	Hypochlorite solution
14.3	Transport hazard class(es)	
	UN RTDG	8
	IMDG-Code	8
	ICAO-TI	8
14.4	Packing group	
	UN RTDG	II
	IMDG-Code	II
	ICAO-TI	II
14.5	Environmental hazards	hazardous to the aquatic environment
	Environmentally hazardous substance (aquatic environment):	Sodium hypochlorite, solution % Cl active

## 14.6 Special precautions for user

There is no additional information.

## 14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

## 14.8 Information for each of the UN Model Regulations

## Transport informationNational regulationsAdditional information(UN RTDG)

**UN number** 1791 Class 8 **Environmental hazards** Hazardous to the aquatic environment **Packing group** II Danger label(s) Fish and tree



**Special provisions (SP)** 

**UN RTDG** 

**Excepted quantities (EQ)** 

**UN RTDG** 

Limited quantities (LQ)

UN RTDG

## International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name HYPOCHLORITE SOLUTION

UN1791, HYPOCHLORITE SOLUTION, (contains: Sodium hypochlorite, solution ... % Cl active, Sodi-Particulars in the shipper's declaration

um hydroxide), 8, II, MARINE POLLUTANT

Marine pollutant yes (P) (hazardous to the aquatic environment), (Sodium hy-

pochlorite, solution ... % Cl active)

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Danger label(s) 8, "Fish and tree"





Special provisions (SP) 274, 900

Excepted quantities (EQ) E2 Limited quantities (LQ) 1 L

**EmS** F-A, S-B

Stowage category В

**Segregation group** 8 - Hypochlorites

## International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name Hypochlorite solution

Particulars in the shipper's declaration UN1791, Hypochlorite solution, 8, II **Environmental hazards** 

**YES** (hazardous to the aquatic environment)

Danger label(s) 8



Special provisions (SP) А3 Excepted quantities (EQ) E2 0,5 L Limited quantities (LQ)

# **SECTION 15: Regulatory information**

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

There is no additional information.

## National regulations(Australia)

## Australian Inventory of Chemical Substances(AICS)

All ingredients are listed or exempt from listing.

## Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### **National inventories**

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed

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Country	Inventory	Status
KR	KECI	all ingredients are listed
MX	INSQ	all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

Legend

AIIC CICR CSCL-ENCS DSL ECSI IECSC Australian Inventory of Industrial Chemicals

Chemical Inventory and Control Regulation List of Existing and New Chemical Substances (CSCL-ENCS)

Domestic Substances List (DSL)
EC Substance Inventory (EINECS, ELINCS, NLP)
Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances

Korea Existing Chemicals Inventory
New Zealand Inventory of Chemicals
Philippine Inventory of Chemicals and Chemical Substances (PICCS) **KECI** 

REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory
TSCA Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## **SECTION 16: Other information**

## Indication of changes (revised safety data sheet)

Alignment to regulation: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.2	Supplemental hazard information		yes
2.2		Supplemental hazard information: change in the listing (table)	yes

## Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand

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Abbr.	Descriptions of used abbreviations
DGR	
	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

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## Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

## **Classification procedure**

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

## **Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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