

according to Regulation (EC) No. 1907/2006 (REACH)

## **Chlorine granules**

Version number: GHS 3.0 (2020-03-20)

Replaces version: GHS 2 (2019-02-22)

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

#### 1.1 Product identifier

Trade name

Identification of the substance

CAS number

Registration number (REACH)

SDS-Ref

**Chlorine granules** 

Troclosene sodium, dihydrate

51580-86-0

01-2119489371-33-xxxx

07512

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

Relevant identified uses

Water treatment chemical

Professional use

Consumer use (private households)

1.3 Details of the supplier of the safety data sheet Steinbach VertriebsgmbH

Steinbach VertriebsgmbH Aistinger Straße 2 4311 Schwertberg

Austria

Telephone: +43 7262 61431 0

e-Mail: info@steinbach.at

e-Mail (competent person): sdb@steinbach.at

## 1.4 Emergency telephone number

Country	Name Postal code/city		Telephone	Opening hours
Austria	Vergiftungsinformationszentrale	1090 Wien	+43 1 406 4343 (24h)	
United King- dom	National Poisons Information Service		111 (24h)	

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and cat- egory	Hazard state- ment
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word

Warning

- Pictograms

GHS07, GHS09



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- Hazard statements

H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long lasting effects.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting P312 Call a POISON CENTRE/doctor if you feel unwell.

P391 Collect spillage.

P501 Dispose of contents/container to hazardous or special waste collection point.

- Supplemental hazard information

EUH031 Contact with acids liberates toxic gas.

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

#### 2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Name of substance Troclosene sodium, dihydrate

CAS No 51580-86-0 EC No 220-767-7

REACH Reg. No 01-2119489371-33-xxxx

Index No 613-030-01-7

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

#### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Take off immediately all contaminated clothing. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Let be drunken in little sips: 0,1-0,2l Water. Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

None

# **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, Alcohol resistant foam, ABC-powder

Unsuitable extinguishing media

Water jet

## 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Hydrogen chloride (HCI), Chlorine (Cl2)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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

## 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

#### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

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**

#### 7.1 Precautions for safe handling

#### Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use only in well-ventilated areas. Use local and general ventilation.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

- Handling of incompatible substances or mixtures

Do not mix with acids.

#### Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

# 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits

#### Control of effects

- Protect against external exposure, such as

High temperatures, Frost, Humidity, UV-radiation/sunlight

- Ventilation requirements

Use local and general ventilation.

#### Packaging compatibilities

Professional use: Only packagings which are approved (e.g. acc. to ADR) may be used. Consumer use (private households): Keep only in original container.

#### Conditions of storage

Keep container tightly closed in a cool place. Protect from sunlight. Keep away from children.

#### 7.3 Specific end use(s)

There is no additional information.

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

#### 8.1 Control parameters

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

Coun try	Name of agent	CAS No	Iden- tifier	TWA [ppm]	TWA [mg/ m³]	STEL [ppm]	STEL [mg/ m³]	Ceil- ing-C [ppm]	Ceil- ing-C [mg/ m³]	Nota- tion	Sourc e
EU	chlorine	7782- 50-5	IOELV			0.5	1.5			proc	2006 /15/ EC
GB	dust		WEL		10					i	EH40 / 2005
GB	dust		WEL		4					r	EH40 / 2005

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

Coun try	Name of agent	CAS No	Iden- tifier	TWA [ppm]	TWA [mg/ m³]	STEL [ppm]	STEL [mg/ m³]	Ceil- ing-C [ppm]	Ceil- ing-C [mg/ m³]	Nota- tion	Sourc e
GB	chlorine	7782- 50-5	WEL			0.5	1.5			proc	EH40 / 2005

#### **Notation**

Ceiling-C ceiling value is a limit value above which exposure should not occur

i inhalable fraction

proc substances released during the process

respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise spe-

cified)

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

less otherwise specified)

#### **Human health values**

#### Relevant DNELs and other threshold levels

	Endpoint Threshold level Protection goal, route of exposure					
Endpoint			Used in	Exposure time		
DNEL	8.11 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects		
DNEL	2.3 mg/kg bw/ day	human, dermal	worker (industry)	chronic - systemic effects		
DNEL	1.99 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects		
DNEL	1.15 mg/kg bw/ day	human, dermal	consumer (private households)	chronic - systemic effects		
DNEL	1.15 mg/kg bw/ day	human, oral	consumer (private households)	chronic - systemic effects		

#### **Environmental values**

# Relevant PNECs and other threshold levels

	Endpoint Threshold level Organism						
Endpoint			Environmental compartment	Exposure time			
PNEC	O <sup>mg</sup> /I	aquatic organisms	freshwater	short-term (single instance)			
PNEC	1.52 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	marine water	short-term (single instance)			
PNEC	0.59 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)			
PNEC	7.56 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	freshwater sediment	short-term (single instance)			
PNEC	0.756 <sup>mg</sup> / <sub>kg</sub>	terrestrial organisms	soil	short-term (single instance)			

## 8.2 Exposure controls (professional use)

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

- Eye/face protection

Use safety goggle with side protection.

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#### Skin protection

- Hand protection

In the case of wanting to use the gloves again, clean them before taking off and air them well.

- Type of material

PVC: polyvinyl chloride, NR: natural rubber, latex

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

#### Respiratory protection

Particulate filter device (EN 143)

Environmental exposure controls

Use appropriate container to avoid environmental contamination. 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	solid
Colour	white
Odour	characteristic
Other safety parameters	
pH (value)	6.7 (water: 10 <sup>g</sup> / <sub>I</sub> , 20 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	not applicable
Evaporation rate	not determined
Flammability (solid, gas)	non-combustible
Explosion limits of dust clouds	not determined
Vapour pressure	<0.006 Pa at 20 °C
Density	not determined
Vapour density	this information is not available
Relative density	information on this property is not available
Auto-ignition temperature	not determined
Decomposition temperature	252 °C
Viscosity	not relevant (solid matter)
Explosive properties	none
Oxidising properties	none
Solubility(ies)	
- Water solubility	248.2 <sup>g</sup> / <sub>l</sub> at 25 °C

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## Partition coefficient

- n-Octanol/water (log KOW)	this information is not available
- Soil organic carbon/water (log KOC)	1.708

#### 9.2 Other information

There is no additional information.

## **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

### 10.2 Chemical stability

See below "Conditions to avoid".

## 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

Hints to prevent fire or explosion

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

#### 10.5 Incompatible materials

There is no additional information.

Release of toxic materials with:

Acids

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

# **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

## Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Harmful if swallowed.

Acute toxicity estimate (ATE)

Oral  $500 \, \text{mg}/\text{kg}$ 

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

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.

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Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

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.

## **SECTION 12: Ecological information**

#### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

#### **Aquatic toxicity (acute)**

Endpoint	Value	Species	Exposure time
LC50	0.24 <sup>mg</sup> / <sub>l</sub>	fish	96 h
EC50	0.17 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	48 h
EbC50	2,700 <sup>mg</sup> / <sub>l</sub>	algae	72 h
ErC50	>100 <sup>mg</sup> / <sub> </sub>	algae	72 h

#### **Aquatic toxicity (chronic)**

Endpoint	Value	Species	Exposure time
EC50	2,600 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	21 d

# 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient

1.708 (ECHA)

# 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Other adverse effects

Endocrine disrupting potential

Not listed.

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## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Other disposal recommendations

Dispose of contents/container to hazardous or special waste collection point. Waste treatment of containers/packagings: Mixed municipal waste.

#### Relevant provisions relating to waste

List of wastes (EU), Decision 2000/532/EC on the list of waste

Product Code/ Type of waste: 19 09 99

#### Remarks

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

# **SECTION 14: Transport information**

**14.1 UN number** 3077

**14.2 UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical name Troclosene sodium, dihydrate

14.3 Transport hazard class(es)

Class 9 (environmentally hazardous)

14.4 Packing group III (substance presenting low danger)

14.5 Environmental hazards hazardous to the aquatic environment

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

#### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

## Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class Classification code

Classification code M7
Packing group III

Danger label(s) 9, fish and tree

Environmental hazards yes (hazardous to the aquatic environment)

Special provisions (SP) 274, 335, 375, 601

Excepted quantities (EQ)

Limited quantities (LQ)

Transport category (TC)

5 kg

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Tunnel restriction code (TRC) Hazard identification No 90
Emergency Action Code 2Z

## **International Maritime Dangerous Goods Code (IMDG)**

UN number 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class

Marine pollutant yes (hazardous to the aquatic environment)

Packing group

Danger label(s) 9, fish and tree

Special provisions (SP) 274, 335, 966, 967, 969

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 kg
EmS F-A, S-F
Stowage category A

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

UN number 3077

Proper shipping name Environmentally hazardous substance, solid, n.o.s.

Class 9

Environmental hazards yes (hazardous to the aquatic environment)

Packing group

Danger label(s) 9, fish and tree



Special provisions (SP) A97, A158, A179, A197

Excepted quantities (EQ) E1
Limited quantities (LQ) 30 kg

## **SECTION 15: Regulatory information**

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Not listed

Not listed.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

## **Seveso Directive**

No	Dangerous substance/hazard categories
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)

#### Deco-Paint Directive (2004/42/EC)

0 %
<i>- 1</i> -2

#### Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content	0 %
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Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

Not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Not listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

Not listed.

#### **National inventories**

Country	Inventory	Status
EU	REACH Reg.	substance is listed

Legend

REACH Reg. REACH registered substances

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## **SECTION 16: Other information**

## Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relevant
3.1	REACH Reg. No: 01-2119489371-33-xxxx		yes
3.1		EC No: 220-767-7	yes
3.1		REACH Reg. No: 01-2119489371-33-xxxx	yes
3.1		Index No: 613-030-01-7	yes
5.2	Hazardous combustion products: Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen chloride (HCl), Chlorine (Cl2)	Hazardous combustion products: Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Hydrogen chloride (HCl), Chlorine (Cl2)	yes
7.3	Specific end use(s): See section 16 for a general overview.	Specific end use(s): There is no additional information.	yes
9.1	Solubility(ies)		yes
9.1	Water solubility: 248.2 <sup>g</sup> / <sub>1</sub> at 25 °C		yes
9.1	Partition coefficient		yes
9.1	- n-octanol/water (log KOW): this information is not available		yes
9.1	Soil organic carbon/water (log KOC): 1.708		yes
9.1	Oxidising properties: none		yes
9.1		Oxidising properties: none	yes
9.1		Solubility(ies)	yes
9.1		Water solubility: 248.2 <sup>g</sup> / <sub>1</sub> at 25 °C	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety- relevant
9.1		Partition coefficient	yes
9.1		n-Octanol/water (log KOW): this information is not available	yes
9.1		Soil organic carbon/water (log KOC): 1.708	yes
10.5	Incompatible materials: Oxidisers	Incompatible materials: There is no additional information.	yes
11.1		Acute toxicity estimate (ATE)	yes
12.4	Mobility in soil: Data are not available.	Mobility in soil	yes
13.1	Professional use: Dispose of contents/container to hazardous or special waste collection point. Waste treatment of containers/packagings: Mixed municipal waste.		yes
13.1	Consumer use (private households): Dispose of contents/container to hazardous or special waste collection point. Waste treatment of containers/packagings: Mixed municipal waste.		yes
13.1		Other disposal recommendations: Dispose of contents/container to hazardous or special waste collection point. Waste treatment of containers/packagings: Mixed municipal waste.	yes
13.1		Relevant provisions relating to waste	yes
13.1		List of wastes (EU), Decision 2000/532/EC on the list of waste: Product Code/ Type of waste: 19 09 99	yes
14.3	Class: 9	Class: 9 (environmentally hazardous)	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Danger label(s): change in the listing (table)	yes
15.1		Deco-Paint Directive (2004/42/EC)	yes
15.1		VOC content: 0 %	yes
15.1		Directive on industrial emissions (VOCs, 2010/75/EU)	yes
15.1		VOC content: 0 %	yes
16		Abbreviations and acronyms: change in the listing (table)	yes

# Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)

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Abbr.	Descriptions of used abbreviations
DNEL	Derived No-Effect Level
EbC50	≡ 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
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
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
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
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
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	short-term exposure limit
SVHC	Substance of Very High Concern
TWA	time-weighted average
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative
WEL	workplace exposure limit

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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according to Regulation (EC) No. 1907/2006 (REACH)

# **Chlorine granules**

Version number: GHS 3.0 (2020-03-20) Replaces version: GHS 2 (2019-02-22)

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

Code	Text
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

## **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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