

## Chlorine granules

Version number: GHS 5.0 (2020-11-10)

Replaces version: GHS 4 (2020-07-03)

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

#### 1.1 Product identifier

Trade name	<b>Chlorine granules</b>
Identification of the substance	Troclosene sodium, dihydrate
CAS number	51580-86-0
Registration number (REACH)	01-2119489371-33-xxxx
SDS-Ref	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)
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#### 1.3 Details of the supplier of the safety data sheet

Steinbach International GmbH  
L. Steinbach Platz 1  
4311 Schwertberg  
Austria  
Telephone: +43 7262 61431  
e-Mail: info@steinbach-group.com  
e-Mail (competent person): sdb@steinbach-group.com

#### 1.4 Emergency telephone number

Country	Name	Postal code/city	Telephone	Opening hours
Austria	Vergiftungsinformationszentrale	1090 Wien	+43 1 406 4343 (24h)	
United Kingdom	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 category	Hazard statement
3.1O	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.

## 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 (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride (HCl), Chlorine (Cl<sub>2</sub>)

### 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.

## 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)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
EU	chlorine	7782-50-5	IOELV			0.5	1.5			proc	2006/15/EC
GB	dust		WEL		10					i	EH40/2005

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

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	dust		WEL		4					r	EH40 / 2005
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
r	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 specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

### Human health values

#### Relevant DNELs and other threshold levels

Endpoint	Threshold level	Protection goal, route of exposure	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/m <sup>3</sup>	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	Environmental compartment	Exposure time
PNEC	0 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	1.52 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	0.59 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	7.56 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0.756 mg/kg	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 goggles with side protection (EN 166).

### 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 g/l, 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 g/l 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 mg/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.

**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.

<b>Aquatic toxicity (acute)</b>			
<b>Endpoint</b>	<b>Value</b>	<b>Species</b>	<b>Exposure time</b>
LC50	0.24 mg/l	fish	96 h
EC50	0.17 mg/l	aquatic invertebrates	48 h
EbC50	2,700 mg/l	algae	72 h
ErC50	>100 mg/l	algae	72 h

  

<b>Aquatic toxicity (chronic)</b>			
<b>Endpoint</b>	<b>Value</b>	<b>Species</b>	<b>Exposure time</b>
EC50	2,600 mg/l	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.

**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**

<b>14.1 UN number</b>	3077
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Technical name	Troclosene sodium, dihydrate
<b>14.3 Transport hazard class(es)</b>	
Class	9 (environmentally hazardous)
<b>14.4 Packing group</b>	III (substance presenting low danger)
<b>14.5 Environmental hazards</b>	hazardous to the aquatic environment
<b>14.6 Special precautions for user</b>	
	Provisions for dangerous goods (ADR) should be complied within the premises.
<b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	
	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	9
Classification code	M7
Packing group	III
Danger label(s)	9, fish and tree



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Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
Transport category (TC)	3
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	9
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
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	III
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.

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

Not listed.

#### Seveso Directive

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

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

VOC content	0 %
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### 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.

### Water Framework Directive (WFD)

List of pollutants (WFD)			
Name of substance	CAS No	Listed in	Remarks
Troclosene sodium, dihydrate		A)	
Troclosene sodium, dihydrate		A)	

#### Legend

A) Indicative list of the main pollutants

## 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
1.3	Details of the supplier of the safety data sheet: Steinbach International GmbH L. Steinbach Platz 1 43111 Schwertberg Austria Telephone: +43 7262 61431 e-Mail: info@steinbach.at e-Mail (competent person): sdb@steinbach.at	Details of the supplier of the safety data sheet: Steinbach International GmbH L. Steinbach Platz 1 43111 Schwertberg Austria Telephone: +43 7262 61431 e-Mail: info@steinbach-group.com e-Mail (competent person): sdb@steinbach-group.com	yes
8.2	- Eye/face protection: Use safety goggle with side protection.	- Eye/face protection: Use safety goggle with side protection (EN 166).	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)
DNEL	Derived No-Effect Level

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Abbr.	Descriptions of used abbreviations
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 ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
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).

**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.