

**Dimethyldioctylammonium chloride**

Version number: GHS 1.1

Date of compilation: 2019-06-04

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

**1.1 Product identifier**

Identification of the substance	<b>Dimethyldioctylammonium chloride</b>
Registration number (REACH)	this information is not available
CAS number	5538-94-3
Alternative name(s)	dimethyldioctylazanium chloride
Article number	A0049666

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

Relevant identified uses	General use
Uses advised against	Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

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

Chemos GmbH & Co. KG  
Sonnenring 7  
84032 Altdorf  
Germany

Telephone: +49 871-966346-0  
Telefax: +49 871-966346-13  
e-mail: chemos@chemos.de  
Website: <http://www.chemos.de/>

e-mail (competent person) chemos@chemos.de

**1.4 Emergency telephone number +49(0)613119240**

Emergency information service	This number is only available during the following office hours: Mon - Thu 08:00 AM - 05:00 PM, Fri 08:00 AM - 12:00 PM
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**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)	3	Acute Tox. 3	H301
3.1D	acute toxicity (dermal)	2	Acute Tox. 2	H310
3.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
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

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

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**2.2 Label elements**

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

- Signal word danger

- Pictograms

GHS05, GHS06, GHS09



- Hazard statements

- H301 Toxic if swallowed.
- H310 Fatal in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H410 Very toxic to aquatic life with long lasting effects.

- Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- 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.

**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	Dimethyldioctylammonium chloride
Identifiers	
CAS No	5538-94-3
EC No	226-901-0
Molecular formula	C18H40NCl
Molar mass	306 g/mol

**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. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

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.

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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.

Following ingestion

Rinse mouth with water (only if the person is conscious). 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, ABC-powder

Unsuitable extinguishing media

Water jet

### 5.2 Special hazards arising from the substance or mixture

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<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.

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

Advices on how to contain a spill

Covering of drains, Take up mechanically

Advices 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.

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**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 local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

- 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.

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 keep food or drink in the vicinity of chemicals. 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.

- Ventilation requirements

Use local and general ventilation.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

**7.3 Specific end use(s)**

See section 16 for a general overview.

**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
GB	dust		WEL		10					i	EH40/2005
GB	dust		WEL		4					r	EH40/2005

Notation

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

i inhalable fraction

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)

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### Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	18.79 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	18.79 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
DNEL	2.67 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

### Environmental values

Relevant PNECs and other threshold levels				
Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	1 µg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0.1 µg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	500 µg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

## 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

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

- 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

#### Appearance

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Physical state	solid
Colour	various
Odour	characteristic

### Other safety parameters

pH (value)	not applicable
Melting point/freezing point	≥16.53 – ≤31.32 °C
Initial boiling point and boiling range	≥176.8 – ≤208.5 °C
Flash point	not applicable
Evaporation rate	not determined
Flammability (solid, gas)	this material is combustible, but will not ignite readily
Explosion limits of dust clouds	not determined
Vapour pressure	0.001 Pa at 20 °C
Density	≥0.925 – ≤0.928 g/cm <sup>3</sup> at 20 °C
Vapour density	this information is not available

### Solubility(ies)

- Water solubility	250 mg/l at 25 °C
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### Partition coefficient

- n-octanol/water (log KOW)	this information is not available
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Auto-ignition temperature	≥400 °C (ECHA)
Decomposition temperature	208.5 °C (ECHA)
Viscosity	not relevant (solid matter)
Explosive properties	none
Oxidising properties	none

## 9.2 Other information

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Surface tension	36.5 mN/m (25 °C) (ECHA)
Solid content	100 %

**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**

Oxidisers

**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

Toxic if swallowed. Fatal in contact with skin.

- Acute toxicity estimate (ATE)

Oral	238 mg/kg
Dermal	50 mg/kg

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.

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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.

### 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	0.7 mg/l	fish	96 h
EC50	0.066 mg/l	aquatic invertebrates	48 h
ErC50	≥0.122 mg/l	algae	72 h

Aquatic toxicity (chronic)			
Endpoint	Value	Species	Exposure time
EC50	0.077 mg/l	aquatic invertebrates	21 d

#### 12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
oxygen depletion	≥33 %	7 d
carbon dioxide generation	96 %	28 d

#### 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Other adverse effects

Data are not available.



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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.

#### 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>	2928
<b>14.2 UN proper shipping name</b>	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
Technical name	Dimethyldioctylammonium chloride
<b>14.3 Transport hazard class(es)</b>	
Class	6.1 (toxic substances) (environmentally hazardous)
Subsidiary risk(s)	8 (corrosive effects)
<b>14.4 Packing group</b>	II (substance presenting medium 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	2928
Proper shipping name	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
Class	6.1
Classification code	TC2
Packing group	II
Danger label(s)	6.1+8, fish and tree
	
Environmental hazards	YES (hazardous to the aquatic environment)
Special provisions (SP)	274, 802(ADN)
Excepted quantities (EQ)	E4
Limited quantities (LQ)	500 g
Transport category (TC)	2

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Tunnel restriction code (TRC)	D/E
Hazard identification No	68
Emergency Action Code	2X
<b>International Maritime Dangerous Goods Code (IMDG)</b>	
UN number	2928
Proper shipping name	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
Class	6.1
Subsidiary risk(s)	8
Marine pollutant	YES (hazardous to the aquatic environment)
Packing group	II
Danger label(s)	6.1+8, fish and tree
	
Special provisions (SP)	274
Excepted quantities (EQ)	E4
Limited quantities (LQ)	500 g
EmS	F-A, S-B
Stowage category	B
<b>International Civil Aviation Organization (ICAO-IATA/DGR)</b>	
UN number	2928
Proper shipping name	Toxic solid, corrosive, organic, n.o.s.
Class	6.1
Subsidiary risk(s)	8
Environmental hazards	YES (hazardous to the aquatic environment)
Packing group	II
Danger label(s)	6.1+8
	
Special provisions (SP)	A5
Excepted quantities (EQ)	E4
Limited quantities (LQ)	1 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)**

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

VOC content	100 %
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**15.2 Chemical Safety Assessment**

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

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**SECTION 16: Other information**

**Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
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
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
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
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
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**

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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
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
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.