

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023

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

- **1.1 Product identifier**
- **Trade name:** Benzoyl chloride
- **Article number:** 687
- **CAS Number:**
98-88-4
- **EC number:**
202-710-8
- **Index number:**
607-012-00-0
- **Registration number** 01-2119487138-29
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Intermediate for use under strictly controlled conditions.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Möller Chemie GmbH & Co. KG
Bürgerkamp 1
D-48565 Steinfurt
Tel.: 02551/9340-0
Fax: 02551/9340-60
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS06

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023

Trade name: Benzoyl chloride

(Contd. of page 1)

- **Signal word** *Danger*

- **Hazard statements**

H302+H312 *Harmful if swallowed or in contact with skin.*

H331 *Toxic if inhaled.*

H314 *Causes severe skin burns and eye damage.*

H317 *May cause an allergic skin reaction.*

- **Precautionary statements**

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.*

P310 *Immediately call a POISON CENTER/doctor.*

P321 *Specific treatment (see on this label).*

P362+P364 *Take off contaminated clothing and wash it before reuse.*

P405 *Store locked up.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher.

- **Results of PBT and vPvB assessment**

- **PBT:**

The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).

- **vPvB:**

The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Description**

98-88-4 benzoyl chloride

- **Identification number(s)**

- **EC number:** 202-710-8

- **Index number:** 607-012-00-0

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:**

Take affected persons out of danger area and lay down.

Immediately remove any clothing soiled by the product.

Show this safety data sheet to the doctor in attendance.

- **After inhalation:**

Move affected person out of the danger zone and into fresh air.

Call a doctor immediately.

After inhalation have the cortisone spray inhaled immediately to prevent toxic pulmonary edema.

- **After skin contact:**

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

Remove contaminated clothing and shoes immediately.

Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Remove any contact lenses if possible. Rinse further.

Small splashes in the eyes can cause irreversible tissue damage and blindness.

Protect uninjured eye.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023

Trade name: Benzoyl chloride

(Contd. of page 2)

Continue rinsing eyes during transport to hospital.

· **After swallowing:**

Do not induce vomiting.

Rinse out mouth and then drink plenty of water.

Call for a doctor immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

Harmful if swallowed, skin contact or inhalation.

May cause an allergic skin reaction.

Causes serious eye damage.

Causes heavy acid burns

· **4.3 Indication of any immediate medical attention and special treatment needed**

Depending on the amount inhaled, treatment with corticosteroid metered dose aerosol.

If necessary, administer cortisone intravenously.

Medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Water, foam, alcohol-resistant foam, fire extinguishing powder

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide, carbon dioxide

halogenated compounds

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained breathing apparatus and chemical protective suit.

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Use water spray to cool closed containers.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Contain and absorb spillage with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal in accordance with local/national regulations.

Use spark-proof tools.

Ensure adequate ventilation.

Dispose contaminated material as waste according to item 13.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Prevent formation of aerosols.

Do not breathe vapour/aerosol

Avoid contact with eyes and skin.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023

Trade name: Benzoyl chloride

(Contd. of page 3)

The product is registered with the strictly controlled conditions as defined in article 17 para. 3 or 18 para. 4 of Regulation (EC) No. 1907/2006 and must therefore be handled accordingly.

- **Information about fire - and explosion protection:**

Protect against electrostatic charges.

Keep ignition sources away - Do not smoke.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Keep container tightly closed and store in a cool, well-ventilated place.

- **Information about storage in one common storage facility:** See section 10.5

- **Further information about storage conditions:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

Keep container tightly sealed.

- **Storage class:** 6.1 C

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:** Not required.

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

Handle only in a place equipped with local exhaust ventilation (or other adequate exhaust ventilation).

- **Appropriate engineering controls** No further data; see item 7.

- **Individual protection measures, such as personal protective equipment**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

Fluorocarbon rubber (Viton)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye/face protection**



Tightly sealed goggles

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023

Trade name: Benzoyl chloride

(Contd. of page 4)

· **Body protection:** Impervious protective clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Fluid
· Colour:	colorless to light yellow
· Odour:	Pungent
· Melting point/freezing point:	-1 °C
· Boiling point or initial boiling point and boiling range	197 °C (1.013 hPa)
· Lower and upper explosion limit	
· Lower:	2.5 Vol %
· Upper:	27 Vol %
· Flash point:	72 °C
· Ignition temperature:	600 °C
· Solubility	
· water:	Not applicable, hydrolyzed
· Vapour pressure at 25 °C:	0.84 hPa
· Density and/or relative density	
· Density at 20 °C:	1.21 g/cm ³

· 9.2 Other information

· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Explosive properties:	Product does not present an explosion hazard.

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· 10.2 Chemical stability

The product is stable if the regulations / instructions for storage and handling are observed.

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** Vapors can form an explosive mixture with air.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023

Trade name: Benzoyl chloride

(Contd. of page 5)

- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials:**
Protect from contamination (base metals, salts, water, alkalis, iron and iron salts, alcohols).
- **10.6 Hazardous decomposition products:**
No hazardous decomposition products if stored and handled as prescribed/indicated become.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

- **Acute toxicity**
Harmful if swallowed or in contact with skin.
Toxic if inhaled.

- **LD/LC50 values relevant for classification:**

Dermal	LD50	790 mg/kg (rabbit)
Inhalative	LC50/ 4h	>1.95 mg/l (rat)

- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
EC50/96 h: 180 mg/l (*Daphnia*)
LC50/96 h: 34.7 mg/l (*Pimephales promels*)
EC50/72 h: 45 mg/l (*Pseudokirchneriella subcapitata*)
- **12.2 Persistence and degradability** Easily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** The product is not considered to be persistent, bioaccumulating nor toxic (PBT).
- **vPvB:** The product is not considered to be persistent or very bioaccumulative (vPvB).
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.

EU

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023



Trade name: Benzoyl chloride

(Contd. of page 6)

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Disposal according to local regulations.
This material and its container must be disposed of safely and in accordance with local regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|--|
| · 14.1 UN number or ID number
· ADR, IMDG, IATA | UN1736 |
| · 14.2 UN proper shipping name
· ADR
· IMDG, IATA | 1736 BENZOYL CHLORIDE
BENZOYL CHLORIDE |
| · 14.3 Transport hazard class(es)
· ADR | |
|  | |
| · Class
· Label | 8 (C3) Corrosive substances.
8 |
| · IMDG, IATA | |
|  | |
| · Class
· Label | 8 Corrosive substances.
8 |
| · 14.4 Packing group
· ADR, IMDG, IATA | II |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user
· Hazard identification number (Kemler code):
· EMS Number:
· Segregation groups
· Stowage Category
· Stowage Code
· Segregation Code | Warning: Corrosive substances.
80
F-A,S-B
(SGG1) Acids
C
SW2 Clear of living quarters.
SG36 Stow "separated from" SGG18-alkalis.
SG49 Stow "separated from" SGG6-cyanides |
| · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| · Transport/Additional information: | |
| · ADR
· Limited quantities (LQ) | 1L |

(Contd. on page 8)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.05.2023

Version number 1

Revision: 04.05.2023

Trade name: Benzoyl chloride

(Contd. of page 7)

· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1736 BENZOYL CHLORIDE, 8, II

SECTION 15: Regulatory information

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

- **Directive 2012/18/EU**
- **Seveso category H2 acutely toxic (cat. 2 + cat. 3, inhal.)**
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3**

· **15.2 Chemical safety assessment:**

This substance should only be used under strictly controlled conditions according to the REACH regulation Article 18(4). Instructions for safe handling according to a risk assessment system should be available in every production facility. All necessary measures should be taken throughout the life cycle to minimize the emission or any resulting exposure.

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department
- **Contact:** Mrs. Steyer
- **Abbreviations and acronyms:**
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - ICAO: International Civil Aviation Organisation
 - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Acute Tox. 4: Acute toxicity – Category 4
 - Acute Tox. 3: Acute toxicity – Category 3
 - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Skin Sens. 1: Skin sensitisation – Category 1

EU