

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Benzoylchlorid zur Synthese

Revision date: 31.05.2022

Product code: 26911

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

##### 1.1. Product identifier

Benzoylchlorid zur Synthese

Substance name: benzoyl chloride  
REACH Registration Number: 01-2119487138-29-XXXX  
CAS No: 98-88-4  
Index No: 607-012-00-0  
EC No: 202-710-8

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

###### Use of the substance/mixture

Laboratory chemicals  
Industrial uses: Uses of substances as such or in preparations at industrial sites  
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

###### Uses advised against

Do not use for private purposes (household).

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

Company name: Fa. Bernd Kraft GmbH  
Street: Stempelstraße 6  
Place: D-47167 Duisburg  
Telephone: 0203/5194-0  
e-mail: info@berndkraft.de  
Contact person: Abteilung Produktsicherheit  
e-mail: produktsicherheit@berndkraft.de  
Internet: www.berndkraft.de  
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290

Telephone: 0203/5194-107/117

##### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

##### Further Information

No data available

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Regulation (EC) No 1272/2008

Acute Tox. 3; H331  
Acute Tox. 4; H312  
Acute Tox. 4; H302  
Skin Corr. 1B; H314  
Eye Dam. 1; H318  
Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### Regulation (EC) No 1272/2008

Signal word: Danger

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**Pictograms:**



**Hazard statements**

H302+H312 Harmful if swallowed or in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H331 Toxic if inhaled.

**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 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.

**2.3. Other hazards**

No information available.

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

**3.1. Substances**

Sum formula: C7H5ClO  
 Molecular weight: 140,6 g/mol

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
98-88-4	benzoyl chloride			100 %
	202-710-8	607-012-00-0	01-2119487138-29-XXXX	
	Acute Tox. 3, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1; H331 H312 H302 H314 H318 H317			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
98-88-4	202-710-8	benzoyl chloride	100 %
	inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg; oral: LD50 = 3619 mg/kg		

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

Take off immediately all contaminated clothing and wash it before reuse.

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**After inhalation**

Provide fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Call a physician immediately.

**After contact with skin**

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.  
Call a physician immediately.  
Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.  
Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Vomiting  
Allergic reactions  
Causes burns.  
Irritant  
Risk of serious damage to eyes.

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

No data available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Extinguishing powder  
Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media**

Water  
Foam

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

Combustible liquids  
Hazardous combustion products  
In case of fire may be liberated:  
Carbon dioxide, Carbon monoxide, Hydrogen chloride (HCl)  
Vapours are heavier than air, spread along floors and form explosive mixtures with air.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet.  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures**

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

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**General advice**

Do not breathe vapour/aerosol.  
Avoid contact with skin, eyes and clothes.  
Vapours are heavier than air, spread along floors and form explosive mixtures with air.

**For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up**

**For containment**

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Read label before use. Use extractor hood (laboratory).

**Advice on protection against fire and explosion**

In case of warming: Vapours are heavier than air, spread along floors and form explosive mixtures with air.  
Keep away from sources of ignition - No smoking.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.  
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Do not breathe dust/fume/gas/mist/vapours/spray.

**Further information on handling**

Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary.  
Take off immediately all contaminated clothing and wash it before reuse.

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

**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide

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adequate ventilation as well as local exhaustion at critical locations.

**Hints on joint storage**

Keep away from: Water

**Further information on storage conditions**

storage temperature: +15°C - +25°C

Store in a dry place.

Store in a well-ventilated place.

**7.3. Specific end use(s)**

Laboratory chemicals

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

**8.1. Control parameters**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
98-88-4	Benzoyl chloride	0.5	-		STEL (15 min)	

**8.2. Exposure controls**

**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

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

**Eye/face protection**

Suitable eye protection: goggles.

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

**By long-term hand contact**

Trade name/designation: KCL 890 Vitoject®  
Recommended material: FKM (fluoro rubber) 0,7 mm  
Wearing time with permanent contact: > 480 min

**By short-term hand contact**

Trade name/designation: KCL 890 Vitoject®  
Recommended material: FKM (fluoro rubber) 0,7 mm  
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

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**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing.  
Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation  
Filtering device with filter or ventilator filtering device of type: B-P2

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state: Liquid  
Colour: colourless

**Changes in the physical state**

Melting point/freezing point: -1 °C  
Boiling point or initial boiling point and boiling range: 198 °C  
Sublimation point: No data available  
Softening point: No data available  
Pour point: No data available  
No data available:  
Flash point: 72 °C

**Flammability**

Solid/liquid: not applicable  
Gas: not applicable

**Explosive properties**

No data available

Lower explosion limits: 2,5 vol. %  
Upper explosion limits: 27 vol. %  
Auto-ignition temperature: 600 °C

**Self-ignition temperature**

Solid: not applicable  
Gas: not applicable

Decomposition temperature: not determined

pH-Value (at 20 °C): 2,0 (1 g/l)

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Water solubility: No

**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water: 1,44

Vapour pressure: 0,84 hPa  
(at 25 °C)

Vapour pressure: No data available

Density: 1,21 g/cm<sup>3</sup>

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Bulk density: No data available  
Relative vapour density: 4,88

**9.2. Other information**

**Information with regard to physical hazard classes**

Sustaining combustion: No data available  
Oxidizing properties  
Not oxidising.

**Other safety characteristics**

Solvent separation test: No data available  
Solvent content: 0  
Solid content: not determined  
Evaporation rate: not determined

**Further Information**

Temperature Class: T1

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

In case of warming: Vapours are heavier than air, spread along floors and form explosive mixtures with air.

**10.2. Chemical stability**

Protect against: Humidity

**10.3. Possibility of hazardous reactions**

Oxidising agent  
Alkali metals  
Alkaline earth metal  
Alcohols  
Amines  
metals  
Water (Danger of explosion)  
Alkali (lye)

**10.4. Conditions to avoid**

Humidity  
Heat

**10.5. Incompatible materials**

metals

**10.6. Hazardous decomposition products**

In case of fire may be liberated:  
SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information**

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

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

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Toxic if inhaled.  
Harmful if swallowed.  
Harmful in contact with skin.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
98-88-4	benzoyl chloride				
	oral	LD50 mg/kg	3619	Rat	Study report (1974) OECD Guideline 401
	dermal	ATE mg/kg	1100		
	inhalation vapour	ATE	3 mg/l		
	inhalation dust/mist	ATE	0,5 mg/l		

**Irritation and corrosivity**

Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Following ingestion Gastric perforation

**Sensitising effects**

May cause an allergic skin reaction. (benzoyl chloride)

**Carcinogenic/mutagenic/toxic effects for reproduction**

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.

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Endocrine disrupting properties**

No data available

**Other information**

No data available

**Further information**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**



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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
98-88-4	benzoyl chloride					
	Acute algae toxicity	ErC50	45 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2000) EU Method C.3

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
98-88-4	benzoyl chloride	1,44

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

Do not empty into drains.

**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 1736
<b>14.2. UN proper shipping name:</b>	BENZOYL CHLORIDE
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C3
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

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**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 1736
<b>14.2. UN proper shipping name:</b>	BENZOYL CHLORIDE
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C3
Limited quantity:	1 L
Excepted quantity:	E2

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 1736
<b>14.2. UN proper shipping name:</b>	BENZOYL CHLORIDE
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B
Segregation group:	1 - acids

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	UN 1736
<b>14.2. UN proper shipping name:</b>	BENZOYL CHLORIDE
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y840
Excepted quantity:	E2
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: strongly corrosive.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

**National regulatory information**

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Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	1 - slightly hazardous to water
Skin resorption/Sensitization:	Permeates easily through outer skin and causes poisoning. Causes allergic hypersensitivity reactions.

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 1,3,4,5,6,7,8,9,10,11,12,13,16.

#### Abbreviations and acronyms

ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%

#### Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H302+H312	Harmful if swallowed or in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.