

MATERIAL SAFETY DATA SHEET
Benzoyl chloride

Section 1 - Chemical Product and Company Identification

MSDS Name:	Benzoyl chloride
Catalog Numbers:	10575-0000, 10575-0010, 10575-0025, 40203-0000, 40203-0025, 40203-0050, 40203-5000
Synonyms:	
Company Identification:	Acros Organics BVBA Janssen Pharmaceuticaaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	800-ACROS-01
For information in Europe, call:	+32 14 57 52 11
Emergency Number, Europe:	+32 14 57 52 99
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300
CHEMTREC Phone Number, Europe:	703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
98-88-4	Benzoyl chloride	99%	202-710-8

Hazard Symbols: C

Risk Phrases: 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Causes burns.
Potential Health Effects

- Eye:** Causes eye burns. Lachrymator (substance which increases the flow of tears). Causes redness and pain.
- Skin:** Harmful if absorbed through the skin. Causes skin burns.
- Ingestion:** Harmful if swallowed. Causes gastrointestinal tract burns. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. Ingestion may cause headache, nausea, and vomiting.
- Inhalation:** Harmful if inhaled. Causes chemical burns to the respiratory tract. May cause pulmonary

edema and severe respiratory disturbances. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Causes sore throat, coughing, shortness of breath, and dental corrosion. May cause headache. May cause nausea and possible vomiting. May cause respiratory difficulty and coughing.

Chronic:

Section 4 - First Aid Measures

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
- Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Section 5 - Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Combustible liquid.
- Extinguishing Media:** Use carbon dioxide or dry chemical. DO NOT USE WATER OR FOAM.

Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

- Handling:** Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.
- Storage:** Keep away from sources of ignition. Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container. Keep under a nitrogen blanket. Corrosives area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

CAS# 98-88-4:

Belgium - STEL: 0.5 ppm VLE; 2.8 mg/m³ VLE

Germany: 2.8 mg/m³ TWA

Malaysia: 0.5 ppm Ceiling; 2.8 mg/m³ Ceiling

Spain: 0.5 ppm VLA-EC; 2.9 mg/m³ VLA-EC

Personal Protective Equipment

- Eyes:** Wear chemical splash goggles.

- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

- Physical State:** Clear liquid
- Color:** Clear liquid (< 40 apha)
- Odor:** pungent odor
- pH:** 2 (1 g/L (20°C))
- Vapor Pressure:** 0.5hPa @20 deg C
- Viscosity:** 0.0012 Pa.s @30 deg C
- Boiling Point:** 198 deg C @760mmHg (388.40°F)
- Freezing/Melting Point:** -1 deg C (30.20°F)
- Autoignition Temperature:** 600 deg C (1,112.00 deg F)
- Flash Point:** 93 deg C (199.40 deg F)
- Explosion Limits: Lower:** 2.5 Vol %
- Explosion Limits: Upper:** 27 Vol %
- Decomposition Temperature:** Not available
- Solubility in water:** reacts, 2 mg/ml
- Specific Gravity/Density:** 1.210
- Molecular Formula:** C7H5ClO
- Molecular Weight:** 140.57

Section 10 - Stability and Reactivity

- Chemical Stability:** Air sensitive. Moisture sensitive.
- Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, temperatures above 65°C, exposure to moist air or water.
- Incompatibilities with Other Materials** Water, strong oxidizing agents, strong bases, alcohols, alkali metals, alkaline earth metals, aluminum, amines, dimethyl sulfoxide, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), explosives (e.g. ammonium nitrate, hydrazoic acid, sodium azide), potassium hydroxide, sodium azide, sulfur oxides.
- Hazardous Decomposition Products** Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide.
- Hazardous Polymerization** Will not occur.

Section 11 - Toxicological Information

- RTECS#:** CAS# 98-88-4: DM6600000
- LD50/LC50:** RTECS:
CAS# 98-88-4: Inhalation, rat: LC50 = 1870 mg/m³/2H;
Oral, rat: LD50 = 1900 mg/kg;
Other: Oral rat LD50 = 2460 mg/kg Inh rat LC50 > 2.343 mg/L/1H Inh rat LC50 = 1.45 mg/L/4H Inh rat LC50 > 1.98 mg/L/4H Skin rabb LD50 = 790 mg/kg
- Carcinogenicity:** Benzoyl chloride - IARC: Group 2A carcinogen
- Other:** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: 43-35 mg/l; 24-96 h
Fish: Leuciscus idus: 200mg/L; 72H; LC0
Fish: Zebrafish: 7.5mg/L; 96H; LC0

Other: Readily biodegradable.

Invertebrate toxicity: LC50 (96 hr) Palomonetes pugio 180 mg/L(Curtis, M. W; et al. Water Res. 1979, 13, 137)EC50 (5-30 min) Photobacterium phosphoreum 12.2 mg/l Microtox test (Kaiser, K. L. E; et al. Water Pollut. Res. J. Canada 1991, 26(3),361-431)Elimination 90%Biodegradability: 95% / 20d (OECD 301D)Log Pow = 2.2 (calculated)

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	CORROSIVE LIQUID, TOXIC, N.O.S.*	CORROSIVE LIQUID, TOXIC, N.O.S.	CORROSIVE LIQUID, TOXIC, N.O.S.
Hazard Class:	8 (6.1)	8 (6.1)	8 (6.1)
UN Number:	2922	2922	2922
Packing Group:	II	II	II

USA RQ: CAS# 98-88-4: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 34 Causes burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 98-88-4: 2

Canada

CAS# 98-88-4 is listed on Canada's DSL List

US Federal

TSCA

CAS# 98-88-4 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 7/16/1996

Revision #2 Date 7/28/2005

Revisions were made in Sections: General revision.

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