Benzoyl chloride
MSDS# 95451

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzoyl chloride
Catalog Numbers: 10575-0000, 10575-0010, 10575-0025, 40203-0000, 40203-0050, 40203-5000, B/2300/PB07, B/2300/PB08, B/2300/PB17, B/2350/PB08
Synonyms: Benzene carbonyl chloride; Benzoic acid, chloride; alpha-Chlorobenzaldehyde
Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG
For information in Europe, call:(01509) 231166
Emergency Number, Europe:01509 231166

Section 2 - Composition, Information on Ingredients

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CAS#: 98-88-4
Chemical Name: Benzoyl chloride
%: >98
EINECS#: 202-710-8
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Hazard Symbols: C
Risk Phrases: 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Causes burns.
Potential Health Effects
Eye: Lachrymator (substance which increases the flow of tears). Causes severe eye irritation and burns.
Skin: Harmful if absorbed through the skin. Causes severe skin irritation and burns.
Ingestion: May cause severe and permanent damage to the digestive tract.
Inhalation: Harmful if inhaled. Causes chemical burns to the respiratory tract. May cause pulmonary edema and severe respiratory disturbances. Vapors may cause lung injury.
Chronic: Animal studies have reported the development of tumors by skin contact.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately.
If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. Vapors can travel to a source of ignition and flash back. Combustible liquid and vapor. Use of water will produce irritating and toxic vapors of hydrogen chloride. Hydrochloric acid solutions react with most metals, forming flammable hydrogen gas.

Extinguishing Media:
Do NOT get water inside containers. Use dry powder or carbon dioxide.

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. Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition.

Use a spark-proof tool. Provide ventilation. Do not expose spill to water. Approach spill from upwind.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Do not allow contact with water. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam. Keep away from heat and flame. Systems and equipment must be scrupulously dry.

Storage:

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with
an eyewash facility and a safety shower.

Exposure Limits
CAS# 98-88-4:
Belgium - STEL: 0.5 ppm VLE; 2.8 mg/m3 VLE
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:
A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: clear, colorless
Odor: pungent odor - penetrating odor
pH: Not available
Vapor Pressure: 0.7 mm Hg @ 25 deg C
Viscosity: Not available
Boiling Point: 197.2 deg C (386.96 F)
Freezing/Melting Point: -1 deg C (30.20 F)
Autoignition Temperature: 568 deg C (1,054.40 deg F)
Flash Point: 68 deg C (154.40 deg F)
Explosion Limits: Lower: 1.2 vol %
Explosion Limits: Upper: 4.9 vol %
Decomposition Temperature: Not available
Solubility in water: decomposes
Specific Gravity/Density: 1.21
Molecular Formula: C7H5ClO
Molecular Weight: 140.57

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures. Liberates heat and hydrochloric acid on contact with water.

Conditions to Avoid:
Ignition sources, contact with water, excess heat, confined spaces.

Incompatibilities with Other Materials
Water, strong oxidizing agents, strong bases, alcohols, amines, dimethyl sulfoxide, attacks metals in the presence of moisture.

Hazardous Decomposition Products
Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide, benzoic acid.

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: Dermal, rabbit: LD50 = 790 mg/kg.

Carcinogenicity:
Benzoyl chloride -
IARC: Group 2A carcinogen

Other:
See actual entry in RTECS for complete information.

Section 12 - Ecological Information
Not available

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information
IATA
Shipping Name: BENZOYL CHLORIDE
Hazard Class: 8
UN Number: 1736
Packing Group: II

IMO
Shipping Name: BENZOYL CHLORIDE
Hazard Class: 8
UN Number: 1736
Packing Group: II

RID/ADR
Shipping Name: BENZOYL CHLORIDE
Hazard Class: 8
UN Number: 1736
Packing Group: 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:
5/25/1999
Revision #5 Date
3/16/2007
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howsoever arising, even if the company has been advised of the
possibility of such damages.

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