MATERIAL SAFETY DATA SHEET
BENZOYL CHLORIDE

SECTION 1: Identification of the substance/mixture and of the company/undertaking			
1.1	**Product identifiers**		
	Product name	:	Benzoyl chloride
	Brand	:	LABORT
	CAS-No.	:	98-88-4
1.2	**Relevant identified uses of the substance or mixture and uses advised against**		
	Identified uses	:	Laboratory chemicals, Industrial
1.3	**Details of the supplier of the safety data sheet**		
	LABORT FINE CHEM PVT LTD. 703-704 ICON BUSINESS CENTRE, OPP. CENTRAL MALL, NR. VALENTINE CINEMA, DUMAS ROAD, SURAT - 395007, (GUJARAT), INDIA. **PH:** 0091-261-2725761; 2725388 **FAX:** 0091-261-2725388 **E MAIL:** info@laboratorychemical.net **WEBSITE:** www.laboratorychemical.net		
1.4	**Emergency telephone number**		
	Emergency Phone #	:	**091-261-2725388**
SECTION 2: Hazards identification			
2.1	**Classification of the substance or mixture**		
	Classification (REGULATION (EC) No 1272/2008) Acute toxicity, Category 4, Oral, H302 Acute toxicity, Category 4, Inhalation, H332 Acute toxicity, Category 4, Dermal, H312 Skin corrosion, Category 1B, H314 Skin sensitisation, Category 1, H317		
2.2	**Label elements**		
	Labelling according Regulation (EC) No 1272/2008		
	Pictogram	:	
	Signal word	:	Danger
	Hazard statement(s)		
	H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage.		

	H317 May cause an allergic skin reaction.
	Precautionary statement(s)
	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.
	Supplemental Hazard statements
	None
2.3	**Other hazards**
	None known

SECTION 3: Composition/information on ingredients

3.1	**Substances**		
	Synonyms	:	
	Formula	:	C_6H_5COCl
	Molecular weight	:	140.57 g/mol
	CAS-No.	:	98-88-4
	EC-No.	:	202-710-8

	Hazardous ingredients according to Regulation (EC) No 1272/2008		
	Component	**Classification**	**Concentration**
	Benzoyl chloride	Acute toxicity, Category 4, H302 Acute toxicity, Category 4, H332 Acute toxicity, Category 4, H312 Skin corrosion, Category 1B, H314 Skin sensitisation, Category 1, H317	<= 100 %

SECTION 4: First aid measures

4.1	**Description of first aid measures**
	General advice First aider needs to protect himself. **After inhalation:** Fresh air. Call in physician. **If breathing stops:** immediately apply artificial respiration, if necessary also oxygen. **In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately. **After eye contact:** rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses. **After swallowing:** make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
4.2	**Most important symptoms and effects, both acute and delayed** Irritation and corrosion, Allergic reactions, Cough, Shortness of breath
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: Carbon dioxide (CO2), Dry powder Unsuitable extinguishing media Water, Foam
5.2	**Special hazards arising from the substance or mixture** Combustible. May not get in touch with: Water Caution! in contact with water product releases: Hydrogen chloride gas Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire. Fire may cause evolution of: Hydrogen chloride gas, Phosgene
5.3	**Advice for firefighters** Special protective equipment for firefightersStay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
5.4	**Further information** Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
SECTION 6: Accidental release measures	
6.1	**Personal precautions, protective equipment and emergency procedures** Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.
6.2	**Environmental precautions** Do not let product enter drains.
6.3	**Methods and materials for containment and cleaning up** Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
6.4	**Reference to other sections** For disposal see section 13.
SECTION 7: Handling and storage	
7.1	**Precautions for safe handling** Advice on safe handling Keep workplace dry. Do not allow product to come into contact with water. Observe label precautions. Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Advice on protection against fire and explosion Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
7.2	**Conditions for safe storage, including any incompatibilities** Keep container tightly closed in a dry and well-ventilated place.
7.3	**Specific end use(s)** Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
SECTION 8: Exposure controls/personal protection	
8.1	**Control parameters**
	Contains no substances with occupational exposure limit values.

8.2	**Exposure control** **Appropriate engineering controls** The product is registered for use under strictly controlled conditions as defined in Article 18(4) of Regulation (EC) No. 1907/2006 (REACH) and must therefore be handled as such.		
	Individual protection measures Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier		
	Eye/face protection	:	Wear protective face shield and goggles.
	Hand protection Full contact	:	Glove material: Vitron Glove thickness: 0.7 mm Break through time: > 480 min
	Hand protection Splash contact	:	Glove material: polychloroprene Glove thickness: 0.65 mm Break through time: > 30 min
	Body Protection	:	Flame retardant antistatic protective clothing.
	Respiratory protection	:	required when vapours/aerosols are generated. Recommended Filter type: filter ABEK The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented

SECTION 9: Physical and chemical properties

9.1	**Information on basic physical and chemical properties**	
	Appearance Form	Liquid
	Colour	Colourless
	Odour	Stinging
	Odour Threshold	No data available
	pH	2 at 1 g/L at 20°C
	Melting point/freezing point	-0.6°C
	Initial boiling point and boiling range	197.2 °C at 1,013 hPa
	Flash point	93 °C Method: DIN 51755 Part 1
	Evaporation rate	No data available
	Flammability (solid, gas)	No data available
	Lower explosion limit	2.5 %(V)
	Upper explosion limit	27 %(V)
	Vapour pressure	133.3 hPa at 128 °C
	Relative Vapour density	4.88
	Density	1.21 g/cm3 at 20 °C
	Relative density	Decomposition
	Water solubility	No data available

	Partition coefficient: noctanol/water	No data available
	Auto-ignition temperature	No data available
	Decomposition temperature	No data available
	Viscosity, dynamic	No data available
	Explosive properties	No data available
	Oxidizing properties	None
9.2	**Other safety information**	
	Ignition Temeperature	600 °C

SECTION 10: Stability and reactivity

10.1	**Reactivity** Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical
10.2	**Chemical stability** sensitive to moisture In case of decomposition in closed containers and tubes risk of bursting due to buildup of overpressure. The product is chemically stable under standard ambient conditions (room temperature)
10.3	**Possibility of hazardous reactions** Violent reactions possible with: Water, Alkali metals, Alkaline earth metals, alkalines, Amines, sulfoxides, Alcohols, Strong oxidizing agents Risk of ignition or formation of inflammable gases or vapours with: Metals Risk of explosion with: dimethyl sulfoxide, aluminium chloride, sodium azide
10.4	**Conditions to avoid** Exposure to moisture Strong heating
10.5	**Incompatible materials** various metals
10.6	**Hazardous decomposition products** In the event of fire: see section 5

SECTION 11: Toxicological information

11.1	**Information on toxicological effects** **Acute oral toxicity** Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Acute inhalation toxicity LC50 Rat: 1.45 mg/l; 4 h ; dust/mist (IUCLID) Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed. **Acute dermal toxicity** This information is not available. **Skin irritation** Rabbit Result: Causes burns. (IUCLID) Causes burns. **Eye irritation** Rabbit Result: Causes burns. (IUCLID) Causes serious eye damage.

	Risk of blindness! **Lacrimal irritation due to vapours.** Sensitisation May cause an allergic skin reaction. Germ cell mutagenicity This information is not available. Carcinogenicity Did not show carcinogenic effects in animal experiments. (IUCLID) Reproductive toxicity This information is not available. Teratogenicity This information is not available. Specific target organ toxicity - single exposure This information is not available. Specific target organ toxicity - repeated exposure This information is not available.
11.2	**Further information** Decomposition of the substance with tissue moisture. After absorption: We have no description of any symptoms of toxicity. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice
SECTION 12: Ecological information	
12.1	**Toxicity**
	Toxicity to fish LC50 Pimephales promelas (fathead minnow): 34.1 mg/l; 96 h (IUCLID) Toxicity to bacteria EC50 activated sludge: > 100 mg/l; 180 min OECD Test Guideline 209
12.2	**Persistence and degradability** *Biodegradability* 95 %; 20 d OECD Test Guideline 301D Readily biodegradable
12.3	**Bioaccumulative potential** No data available.
12.4	**Mobility in soil** No data available.
12.5	**Results of PBT and vPvB assessment** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
12.6	**Other adverse effects** Additional ecological information Product reacts with water. The following may develop after reaction of the product with water: hydrochloric acid Harmful effect due to pH shift. Discharge into the environment must be avoided.
SECTION 13: Disposal considerations	
13.1	**Waste treatment methods** **Product** Waste treatment methods

	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. **Contaminated packaging** Dispose of as unused product.		
SECTION 14: Transport information			
14.1	**UN number**		
	ADR/RID: 1736	IMDG: 1736	IATA: 1736
14.2	**UN proper shipping name**		
	ADR/RID: BENZOYL CHLORIDE IMDG: BENZOYL CHLORIDE IATA: BENZOYL CHLORIDE		
14.3	**Transport hazard class(es)**		
	ADR/RID: 8	IMDG: 8	IATA: 8
14.4	**Packaging group**		
	ADR/RID: II	IMDG: II	IATA: II
14.5	**Environmental hazards**		
	ADR/RID: --	IMDG Marine pollutant: --	IATA: --
14.6	**Special precautions for user**		
	ADR/RID: Yes Tunnel restriction code - E	IMDG Marine pollutant: Yes EmS - F-A S-B	IATA: no
SECTION 15: Regulatory information			
15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture** National legislation Storage class 8A		
15.2	**Chemical safety assessment** For this product a chemical safety assessment was not carried out.		
SECTION 16: Other information			
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