

**Material Safety Data Sheet****2,4 - DICHLORO BENZOYL CHLORIDE****Section 1 - Product and Company Information**

Substance : 2,4 – Dichloro Benzoyl Chloride  
Trade Name : 2,4 – Dichloro Benzoyl Chloride, DCOC  
Chemical Family : Acid Chloride  
Company : Shiva Pharmachem Ltd.  
Plot No. 588,  
Village Luna – 391440  
Taluka Padra,  
District: Vadodara, Gujarat,  
India.  
Phone No. : +91-2662-221021 / 224360  
Fax No. : +91-2662-223314

**Section 2 - Composition / Information on Ingredients**

Product Name	CAS No.	EC No.	Mol. Formula	Mol. Weight.
2,4 – Dichloro Benzoyl Chloride`	89-75-8	201-936-4	C <sub>7</sub> H <sub>3</sub> Cl <sub>3</sub> O	209.46 g/mol

**Section 3 – Hazards Identification****SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIROMENT****HAZARD DISCRPTION**

Highly Corrosive. Reacts violently with water. Causes Burns

**Section 4 – First Aid Measures****GENERAL INFORMATION**

Immediately remove any clothing soiled by the product.

**INHALATION**

Supply fresh air, If required, provide artificial respiration. Keep patient warm  
Seek immediately medical advice.

**EYE Contact**

Rinse opened eye atleast for 15-20 Minutes under running water. Then consult a doctor.

**SKIN Contact**

Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.

**SWALLOWING**

Seek immediate medical advice.

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### **Section 5 – Fire Fighting Measures**

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#### **EXTINGUISHING MEDIA**

Suitable: Carbon Dioxide. Dry Chemical Powder, sand

Unsuitable: Do not use water

#### **SPECIAL RISKS**

Specific Hazards caused by the material, its products of combustion or resulting gases.

Reacts violently with water.

In case of fire, the following can be released: Carbon monoxide and carbon dioxide, Hydrogen Chloride.

#### **SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS**

Wear self contained respirator. Wear fully protective impervious suit.

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### **Section 6 – Accidental Release Measures**

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#### **PERSON RELATED SAFETY PRECAUTION(S)**

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

#### **METHODS FOR CLEANING UP**

Absorb with liquid binding material (sand, dolomite acid binders, universal binders, sawdust). Use neutralizing agent. Dispose contaminated materials as waste according to section 13.

#### **METHODS OF ENVIRONMENTAL PROTECTION(S)**

Do not allow material to be released to the environment without proper government permits

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### **Section 7 - Handling and Storage**

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#### **HANDLING**

Directions for safe Handling: Handle under dry protective gas. Keep container tightly sealed. Store in Cool, dry place in tightly closed containers. Ensure good ventilation at work place. Keep ignition sources away.

#### **STORAGE**

Conditions of Storage: Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Store away from water/ moisture. Store away from oxidizing agents, strong base. Store under dry inert gas. Protect from humidity and water. This Product is water sensitive.

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### **Section 8 - Exposure Controls / Personal Protection**

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#### **ENGINEERING CONTROLS**

Properly operating chemical fume hood designed for hazardous chemicals and having an average velocity of at least 100 feet per minute.

#### **PERSONAL PROTECTIVE EQUIPMENT**

General protective and hygienic measures: The usual precautionary and measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hand before breaks and at the end of work. Avoid contact with eye or skin.

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#### **BREATHING EQUIPMENT**

Use suitable respirator when high concentration are present.

#### **HAND PROTECTION EQUIPMENT**

Use impervious gloves. Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on the quality.

#### **EYE PROTECTION EQUIPMENT**

Use safety glasses. Tightly sealed goggles. Full face protection.

#### **BODY PROTECTION EQUIPMENT**

Use protective work clothing.

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### **Section 9 - Physical and Chemical Properties**

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Appearance Color	: Light Yellow
Form	: Liquid
Property	: Value                      at Temperature or Pressure
PH	: N/A
BP/BP Range	: 149° – 151o C (300-304 ° F)/ 34 mm Hg
MP/MP Range	: 16-18 °C (61-64° F)
Flash Point	: 138° C (280° F)
Flammability	: N/A
Autoignition Temp	: N/A
Oxidizing Properties	: N/A
Explosive Properties	: N/A
Explosive Limits Lower / UPPER	: N/A
Vapor Pressure	: N/A
SG/Density	: 1.494 G/CM3 @ 25° C (68° F)
Partition Coefficient	: N/A
Viscosity	: N/A
Vapor Density	: N/A
Saturated Vapor Conc	: N/A
Evaporation Rate	: N/A
Bulk Density	: N/A
Decomposition Temp.	: N/A
Solvent Content	: N/A
Water Content	: N/A
Surface Tension	: N/A
Conductivity	: N/A
Miscellaneous Data	: N/A
Solubility with water	: Reacts violently
Solubility other Solvents	: Miscible with ether

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### **Section 10 - Stability and Reactivity**

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#### **STABILITY:**

Conditions to avoid: Water/Moisture, Oxidizing agents, Bases

Dangerous Reactions: Reacts violently with water.

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### **HAZARDOUS DECOMPOSITION PRODUCTS**

Hazardous Decomposition Products: Carbon Monoxide, Carbon dioxide and hydrogen chloride

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## **Section 11 - Toxicological Information**

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### **ACUTE TOXICITY**

LD50

Oral

Rat: 4640 mg/kg

LD50

Dermal/Skin

Rabbit: 3160 mg/kg

### **SUBACUTE OF CHRONIC TOXICITY**

The registry of Toxic effects of chemical substance (RTECS) reports the following behavioral effects in laboratory animals.

Behavioral : Somnolence (general depressed activity)

Lungs, Thorax or Respiration : Dyspnea

Skin And appendages : Hair, dermatitis, others (after systemic exposure)

Corrosive materials are acutely destructive to the reparatory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation edema and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath headache, nausea and vomiting. Ingestion may cause damage to mouth, throat and esophagus. May cause skin burns of irritation depending on the severity of the exposure.

### **SIGNS AND SYMPTOMS OF EXPOSURE**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. Swallowing will lead to strong corrosive effect in mouth and throat and to the danger of perforation of esophagus and stomach

No Classification of data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA OR ACGIH.

### **ROUTE OF EXPOSURE**

On the skin: Corrosive effect on skin and mucous membranes. Irritant to skin and mucous membranes.

On the Eye : Strong corrosive effect, Irritating effect.

Sensitization : No sensitization effect known.

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## **Section 12 - Ecological Information**

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### **ECOTOXICOLOGICAL EFFECTS**

General Information: Do not allow material to be released to the environment without proper government permits.

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### Section 13 - Disposal Considerations

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#### SUBSTANCE DISPOSAL

Consult state, local or national regulations to ensure proper disposal

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### Section 14 - Transport Information

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DOT

Hazard Class	: 8
Identification No	: UN 3094
Packing Group	: II
Proper Shipping Name	: Corrosive liquid, Water reactive n.o.s
Technical Name	2,4 Dichlorobenzoyl Chloride
Label	: 8+4.3

#### ARD/RID

ARD/RID	: 8 c3 corrosive substances
Danger	: 80
Un-Number	: 3265
Packaging group	: II
Description of goods	: 3265 Corrosive liquid, Acidic, Organic N.o.s (2,4 Dichloro Benzoyl Chloride)

#### IMDG

IMDG Class	: 8
UN/ID Number	: 3265
Label	: 8
Packaging Group	: II
Proper Shipping Name	: Corrosive liquid, Acidic, organic n.o.s (2,4 Dichloro benzoyl Chloride)

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### Section 15 - Regulatory Information

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#### CLASSIFICATION AND LABELLING ACCORDING TO U.S DIRECTIVES

##### HAZARD SYMBOL

C : Corrosive

##### RISK PHRASES

14 : Reacts violently with water  
34 : Causes Burns

##### SAFETY PHRASES

8 : Keep container dry  
20 : while using do not eat or drink  
26 : Incase of contact with eyes, rinse immediately with plenty of water and seek medical advice  
30 : Never ass water to this product.  
36/37/39 : In case of accident or if you feel unwell, seek medical advice immediately.

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60 : This material and its container must be disposed of as hazardous waste.

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**Section 16 - Additional Information**

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Shiva Pharmachem Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incident, consequential or exemplary damages, howsoever arising, even if Shiva Pharmachem Ltd has been advised of the possibility of such damages