

## 4-CHLOROBENZOYL CHLORIDE

GHS Safety Data Sheet

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### Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT NAME

4-CHLOROBENZOYL CHLORIDE

#### OTHER NAMES

C7-H4-Cl2-O, ClC6H4COCl, "benzoyl chloride, 4-chloro-"

#### PROPER SHIPPING NAME

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(contains 4-chlorobenzoyl chloride)

#### PRODUCT USE

Reagent.

#### SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V.Ind.Estate,

248, Worli Road,

Mumbai- 400030, India

www.sdfine.com

Telephone: 91- 22 24959898/99

Fax: 91- 22 2493 7232

Email: technical@sdfine.com

### Section 2 - HAZARDS IDENTIFICATION

#### GHS Classification

Metal Corrosion Category 1

Serious Eye Damage Category 1

Skin Corrosion/Irritation Category 1A

Skin Sensitizer Category 1



#### EMERGENCY OVERVIEW

#### HAZARD

DANGER

Determined by using GHS criteria

|      |                                          |
|------|------------------------------------------|
| H290 | May be corrosive to metals.              |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction.     |
| H318 | Causes serious eye damage.               |

#### PRECAUTIONARY STATEMENTS

##### Prevention

| Code | Phrase                                                                 |
|------|------------------------------------------------------------------------|
| P234 | Keep only in original container.                                       |
| P260 | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.                  |
| P261 | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.                 |
| P264 | Wash ... thoroughly after handling.                                    |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |

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## Section 2 - HAZARDS IDENTIFICATION

|                 |                                                                                                                                  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P280            | Wear protective gloves/protective clothing/eye protection/face protection.                                                       |
| <b>Response</b> |                                                                                                                                  |
| <b>Code</b>     | <b>Phrase</b>                                                                                                                    |
| P301+P330+P331  | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.                                                                               |
| P302+P352       | IF ON SKIN: Wash with plenty of soap and water.                                                                                  |
| P303+P361+P353  | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.                       |
| P304+P340       | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                                 |
| 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 or doctor/physician.                                                                            |
| P333+P313       | If skin irritation or rash occurs: Get medical advice/attention.                                                                 |
| P363            | Wash contaminated clothing before reuse.                                                                                         |
| P390            | Absorb spillage to prevent material damage.                                                                                      |
| <b>Storage</b>  |                                                                                                                                  |
| <b>Code</b>     | <b>Phrase</b>                                                                                                                    |
| P405            | Store locked up.                                                                                                                 |
| P406            | Store in corrosive resistant container or with a resistant inner liner.                                                          |
| <b>Disposal</b> |                                                                                                                                  |
| <b>Code</b>     | <b>Phrase</b>                                                                                                                    |
| P501            | Dispose of contents/container to ...                                                                                             |

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME                                             | CAS RN     | %   |
|--------------------------------------------------|------------|-----|
| 4- chlorobenzoyl chloride                        | 122-01-0   | >98 |
| hydrolyses in water to produce hydrogen chloride | 7647-01-0. |     |

## Section 4 - FIRST AID MEASURES

### SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

### EYE

- If this product comes in contact with the eyes:
- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

### SKIN

- If skin or hair contact occurs:
- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

### INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.
- Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).
- As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.

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### Section 4 - FIRST AID MEASURES

- Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

#### NOTES TO PHYSICIAN

- Treat symptomatically.

For acute or short term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the dessicating action of the acid on proteins in specific tissues.

### Section 5 - FIRE FIGHTING MEASURES

#### EXTINGUISHING MEDIA

- DO NOT use water.

#### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use fire fighting procedures suitable for surrounding area.

#### FIRE/EXPLOSION HAZARD

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.
- Heating may cause expansion or decomposition leading to violent rupture of containers.

Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), hydrogen chloride, phosgene, other pyrolysis products typical of burning organic material.

#### FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

### Section 6 - ACCIDENTAL RELEASE MEASURES

#### MINOR SPILLS

- Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
- Check regularly for spills and leaks.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

#### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

### Section 7 - HANDLING AND STORAGE

#### PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.

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## Section 7 - HANDLING AND STORAGE

### PACKAGING MATERIAL INCOMPATIBILITIES

Chemical Name Container Type  
" Acetal (Delrin)" , " Cast iron" , Neoprene

### SUITABLE CONTAINER

- DO NOT use aluminium or galvanised containers.
- Check regularly for spills and leaks.
- Glass container is suitable for laboratory quantities.
- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure. <</>.

### STORAGE INCOMPATIBILITY

- Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.
- Segregate from alcohol, water.
- Avoid strong bases.
- Segregate from alkalis, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.
- NOTE: May develop pressure in containers; open carefully. Vent periodically.

Hydrogen chloride:

- reacts strongly with strong oxidisers (releasing chlorine gas), acetic anhydride, caesium cyanotridecahydrodecaborate(2-), ethylidene difluoride, hexalithium disilicide, metal acetylide, sodium, silicon dioxide, tetraselenium tetranitride, and many organic materials
  - is incompatible with alkaline materials, acetic anhydride, acetylides, aliphatic amines, alkanolamines, alkylene oxides, aluminium, aluminium-titanium alloys, aromatic amines, amines, amides, 2-aminoethanol, ammonia, ammonium hydroxide, borides, calcium phosphide, carbides, carbonates, cyanides, chlorosulfonic acid, ethylenediamine, ethyleneimine, epichlorohydrin, formaldehyde, isocyanates, metals, metal oxides, metal hydroxides, metal acetylides, metal carbides, oleum, organic anhydrides, potassium permanganate, perchloric acid, phosphides, 3-propiolactone, silicides, sulfides, sulfites, sulfuric acid, uranium phosphide, vinyl acetate, vinylidene fluoride
  - attacks most metals forming flammable hydrogen gas, and some plastics, rubbers and coatings
  - reacts with zinc, brass, galvanised iron, aluminium, copper and copper alloys.
- Avoid strong bases, alcohols and water.

### STORAGE REQUIREMENTS

- Store in original containers.
  - Keep containers securely sealed.
  - Store in a cool, dry, well-ventilated area.
  - Store away from incompatible materials and foodstuff containers.
- Moisture sensitive.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

| Source                                                                      | Material                              | Peak ppm | Peak mg/m <sup>3</sup> |
|-----------------------------------------------------------------------------|---------------------------------------|----------|------------------------|
| India Permissible Levels of Certain Chemical Substances in Work Environment | hydrogen chloride (Hydrogen chloride) | 5        | 7                      |

The following materials had no OELs on our records

- 4- chlorobenzoyl chloride: CAS:122- 01- 0

### MATERIAL DATA

4-CHLOROBENZOYL CHLORIDE:

HYDROGEN CHLORIDE:

- for hydrogen chloride:

Odour Threshold Value: 0.262 ppm (detection), 10.06 ppm (recognition)

NOTE: Detector tubes for hydrochloric acid, measuring in excess of 1 ppm, are available commercially.

Hydrogen chloride is a strong irritant to the eyes, mucous membranes and skin.

### PERSONAL PROTECTION

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION



### RESPIRATOR

- Type B-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

### EYE

- Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure
- Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted
- Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.
- Alternatively a gas mask may replace splash goggles and face shields.

### HANDS/FEET

- Elbow length PVC gloves.
- When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

#### NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
  - Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:.
- Neoprene gloves.

### OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.

### ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

Colourless liquid; hydrolyses in water.

### PHYSICAL PROPERTIES

Corrosive.  
Acid.

|                           |               |                                 |                |
|---------------------------|---------------|---------------------------------|----------------|
| State                     | LIQUID        | Molecular Weight                | 175.01         |
| Melting Range (°C)        | 12- 14        | Viscosity                       | Not Available  |
| Boiling Range (°C)        | 222           | Solubility in water (g/L)       | Reacts         |
| Flash Point (°C)          | 105.00        | pH (1% solution)                | Not available  |
| Decomposition Temp (°C)   | Not Available | pH (as supplied)                | Not applicable |
| Autoignition Temp (°C)    | Not available | Vapour Pressure (kPa)           | Not available  |
| Upper Explosive Limit (%) | Not available | Specific Gravity (water=1)      | Not available  |
| Lower Explosive Limit (%) | Not available | Relative Vapour Density (air=1) | >1             |
| Volatile Component (%vol) | Not available | Evaporation Rate                | Not available  |

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Contact with alkaline material liberates heat.
  - Presence of incompatible materials.
  - Product is considered stable.
  - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

## Section 11 - TOXICOLOGICAL INFORMATION

### Health hazard summary table:

|                                   |                |
|-----------------------------------|----------------|
| Acute toxicity                    | Not applicable |
| Skin corrosion/irritation         | Skin Corr. 1 A |
| Serious eye damage/irritation     | Eye Dam. 1     |
| Respiratory or skin sensitization | Skin Sens. 1   |
| Germ cell mutagenicity            | Not applicable |
| Carcinogenicity                   | Not applicable |
| Reproductive toxicity             | Not applicable |
| STOT- single exposure             | Not applicable |
| STOT- repeated exposure           | Not applicable |
| Aspiration hazard                 | Not applicable |

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

- Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident.
- The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

##### EYE

- If applied to the eyes, this material causes severe eye damage.
- Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely.
- Irritation of the eyes may produce a heavy secretion of tears (lachrymation).

##### SKIN

- Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.
- Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
- Solution of material in moisture on the skin, or perspiration, may markedly increase skin corrosion and accelerate tissue destruction.

##### INHALED

- The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
- Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness.
- Inhalation hazard is increased at higher temperatures.
- The material has NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because of the lack of corroborating animal or human evidence.
- Inhalation of quantities of liquid mist may be extremely hazardous, even lethal due to spasm, extreme irritation of larynx and bronchi, chemical pneumonitis and pulmonary oedema.
- Hydrogen chloride (HCl) vapour or fumes present a hazard from a single acute exposure. Exposures of 1300 to 2000 ppm have been lethal to humans in a few minutes.

### CHRONIC HEALTH EFFECTS

- Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Chronic exposure may inflame the skin or conjunctiva.
- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related

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## Section 11 - TOXICOLOGICAL INFORMATION

systemic problems.

Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Chronic minor exposure to hydrogen chloride (HCl) vapour or fume may cause discolouration or erosion of the teeth, bleeding of the nose and gums; and ulceration of the nasal mucous membranes.

Repeated exposures of animals to concentrations of about 34 ppm HCl produced no immediate toxic effects.

Workers exposed to hydrochloric acid suffered from gastritis and a number of cases of chronic bronchitis have also been reported.

Repeated or prolonged exposure to dilute solutions of HCl may cause dermatitis.

### TOXICITY AND IRRITATION

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

No significant acute toxicological data identified in literature search.

### CARCINOGEN

|                   |                                                                                             |       |   |                                                      |
|-------------------|---------------------------------------------------------------------------------------------|-------|---|------------------------------------------------------|
| hydrogen chloride | International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs | Group | 3 | Not classifiable as to its carcinogenicity to humans |
|-------------------|---------------------------------------------------------------------------------------------|-------|---|------------------------------------------------------|

### SKIN

|                   |                                                    |                               |      |
|-------------------|----------------------------------------------------|-------------------------------|------|
| hydrogen chloride | GESAMP/EHS Composite List - GESAMP Hazard Profiles | D1: skin irritation/corrosion | (3C) |
| hydrogen chloride | GESAMP/EHS Composite List - GESAMP Hazard Profiles | D1: skin irritation/corrosion | 3C   |

## Section 12 - ECOLOGICAL INFORMATION

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

### Ecotoxicity

| Ingredient        | Persistence: Water/Soil | Persistence: Air  | Bioaccumulation | Mobility |
|-------------------|-------------------------|-------------------|-----------------|----------|
| hydrogen chloride | LOW                     | No Data Available | LOW             | HIGH     |

## Section 13 - DISPOSAL CONSIDERATIONS

• Containers may still present a chemical hazard/ danger when empty.

• Return to supplier for reuse/ recycling if possible.

Otherwise:

• If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

• Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

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## Section 13 - DISPOSAL CONSIDERATIONS

- Reduction.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation with soda-ash or soda-lime followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus
- Decontaminate empty containers with 5% aqueous sodium hydroxide or soda ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed.

## Section 14 - TRANSPORTATION INFORMATION



Labels Required: CORROSIVE

**HAZCHEM:**  
2X

Land Transport UNDG:

|                                                                                              |      |                   |      |
|----------------------------------------------------------------------------------------------|------|-------------------|------|
| Class or division:                                                                           | 8    | Subsidiary risk:  | None |
| UN No.:                                                                                      | 3265 | UN packing group: | II   |
| Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains 4-chlorobenzoyl chloride) |      |                   |      |

**Air Transport IATA:**

|                     |        |                    |      |
|---------------------|--------|--------------------|------|
| ICAO/IATA Class:    | 8      | ICAO/IATA Subrisk: | None |
| UN/ID Number:       | 3265   | Packing Group:     | II   |
| Special provisions: | A3A803 |                    |      |

Shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains 4-chlorobenzoyl chloride)

**Maritime Transport IMDG:**

|                     |            |                     |      |
|---------------------|------------|---------------------|------|
| IMDG Class:         | 8          | IMDG Subrisk:       | None |
| UN Number:          | 3265       | Packing Group:      | II   |
| EMS Number:         | F- A, S- B | Special provisions: | 274  |
| Limited Quantities: | 1 L        |                     |      |

Shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains 4-chlorobenzoyl chloride)

## Section 15 - REGULATORY INFORMATION

### REGULATIONS

**4-chlorobenzoyl chloride (CAS: 122-01-0) is found on the following regulatory lists;**

"Acros Transport Information", "India Hazardous Wastes (Management, Handling and Transboundary Movement) Rules - Schedule 2: List of Wastes Constituents with Concentration Limits", "Sigma-Aldrich Transport Information", "WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established"

### Regulations for ingredients

**hydrogen chloride (CAS: 7647-01-0) is found on the following regulatory lists;**

"Acros Transport Information", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "Fisher Transport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "India Chemical Accidents Rules - Schedule 1: List of Hazardous Chemicals", "India Chemical Accidents Rules - Schedule 3: Named Chemicals", "India Hazardous Wastes (Management, Handling and Transboundary Movement) Rules - Schedule 2: List of Wastes Constituents with Concentration Limits", "India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 1: List of Hazardous and Toxic Chemicals", "India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 3: List of Hazardous Chemicals for Application of Rules 5 and 7 to 15", "India Permissible Levels of Certain Chemical Substances in Work Environment", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Maritime Dangerous Goods Requirements (IMDG

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### Section 15 - REGULATORY INFORMATION

Code) - Goods Forbidden for Transport", "International Numbering System for Food Additives", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-Aldrich Transport Information", "United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II", "United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control (Red List) - Table II", "WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established"

### Section 16 - OTHER INFORMATION

#### Denmark Advisory list for selfclassification of dangerous substances

| Substance                 | CAS         | Suggested codes                               |
|---------------------------|-------------|-----------------------------------------------|
| 4- chlorobenzoyl chloride | 122- 01- 0  | Rep3; R63 Xn;<br>R22 R43 Xi; R38<br>N; R51/53 |
| hydrogen chloride         | 7647- 01- 0 | Rep3; R63 Xn;<br>R22 R43 Xi; R38<br>N; R51/53 |

- Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 26-Jul-2018