4-(Dimethylamino)benzoyl chloride

sc-252097

Material Safety Data Sheet

Hazard Alert Code
Key:  
EXTREME  HIGH  MODERATE  LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
4-(Dimethylamino)benzoyl chloride

STATEMENT OF HAZARDOUS NATURE

NFPA

SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS
C9-H10-Cl-N-O, (CH3)2NC6H4COCl, "4-dimethylaminobenzoyl chloride", "p-(dimethylamino)benzoyl chloride"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Toxicity</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Body Contact</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Chronic</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

CANADIAN WHMIS SYMBOLS
EMERGENCY OVERVIEW

RISK
Reacts violently with water.
Causes burns.
Risk of serious damage to eyes.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
- The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.
- Ingestion of acidic corrosives may produce burns around and in the mouth.
- The material has NOT been classified as "harmful by ingestion".
  This is because of the lack of corroborating animal or human evidence.

EYE
- The material can produce chemical burns to the eye following direct contact.
- Vapors or mists may be extremely irritating.
- 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.

SKIN
- The material can produce chemical burns following direct contact with the 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, however 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.

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.
- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
- 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.
- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
- Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
- Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
- 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.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS RN</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(dimethylamino)benzoyl chloride</td>
<td>4755-50-4</td>
<td>&gt;98</td>
</tr>
<tr>
<td>hydrolysis yields</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hydrogen chloride</td>
<td>7647-01-0</td>
<td></td>
</tr>
</tbody>
</table>

### Section 4 - FIRST AID MEASURES

**SWALLOWED**
- For advice, contact a Poisons Information Center or a doctor at once.
- Urgent hospital treatment is likely to be needed.

**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.

**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.

**INHALED**
- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
Inhalation of vapors or aerosols (mists, fumes) may cause lung edema. Corrosive substances may cause lung damage (e.g.

**NOTES TO PHYSICIAN**
- 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

### Section 5 - FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Vapour Pressure (mmHG)</th>
<th>Negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Specific Gravity (water=1)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**EXTINGUISHING MEDIA**
- Foam.
- Dry chemical powder.

**FIRE FIGHTING**
- Alert Emergency Responders and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
When any large container (including road and rail tankers) is involved in a fire,
consider evacuation by 800 metres in all directions.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS
- Combustible.
- Slight fire hazard when exposed to heat or flame.

Combustion products include carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride, phosgene, nitrogen oxides (NOx), other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY
Avoid contamination with oxidizing agents i.e. nitrates, oxidizing 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.
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS
- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
- Do NOT cut, drill, grind or weld such containers.
- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS
DO NOT use aluminum or galvanized containers.
- Check regularly for spills and leaks.
- Lined metal can, Lined metal pail/drum
- Plastic pail
- 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 REQUIREMENTS
- Store in original containers.
- Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

<table>
<thead>
<tr>
<th>Source</th>
<th>Material</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
<th>Peak ppm</th>
<th>Peak mg/m³</th>
<th>F/CC</th>
<th>Notes</th>
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<table>
<thead>
<tr>
<th>Location</th>
<th>Chemical</th>
<th>PELs (mg/m³)</th>
<th>RELs (mg/m³)</th>
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<tbody>
<tr>
<td>Canada - Alberta Occupational Exposure Limits</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Canada - British Columbia Occupational Exposure Limits</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride Revised 2003)</td>
<td>2</td>
<td></td>
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<tr>
<td>US - Minnesota Permissible Exposure Limits (PELs)</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5</td>
<td>7</td>
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<tr>
<td>US NIOSH Recommended Exposure Limits (RELs)</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5</td>
<td>7</td>
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<tr>
<td>US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5</td>
<td>7</td>
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<tr>
<td>US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride) (C)5 (C)7</td>
<td></td>
<td></td>
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<tr>
<td>US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5</td>
<td>7</td>
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<tr>
<td>US - California Permissible Exposure Limits for Chemical Contaminants</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride; muriatic acid)</td>
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<tr>
<td>US - Idaho - Limits for Air Contaminants</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
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<td>US - Hawaii Air Contaminant Limits</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
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<td>7</td>
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<tr>
<td>US - Alaska Limits for Air Contaminants</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5</td>
<td>7</td>
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<tr>
<td>US - Michigan Exposure Limits for Air Contaminants</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
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<td>7</td>
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<tr>
<td>Location</td>
<td>Substance and Concentrations</td>
<td>Concentration Limits</td>
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<tr>
<td>--------------------------</td>
<td>------------------------------</td>
<td>----------------------</td>
<td></td>
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<tr>
<td>Canada - Yukon</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5 7  -  -</td>
<td></td>
</tr>
<tr>
<td>US - Washington</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5.0</td>
<td></td>
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<tr>
<td>Canada - Saskatchewan</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
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<tr>
<td>US - Oregon</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
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<td>US - Wyoming</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5 7</td>
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<tr>
<td>Canada - Quebec</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5 7,5</td>
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<td>US OSHA</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5 7</td>
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<td>Canada - Northwest Territories</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5 7.5</td>
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<tr>
<td>Canada - Nova Scotia</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>5 7</td>
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<tr>
<td>Canada - Prince Edward Island</td>
<td>4-(dimethylamino)benzoyl chloride (Hydrogen chloride)</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

TLV Basis:
- upper respiratory tract irritation
PERSONAL PROTECTION

RESPIRATOR
• Type AB-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 1432000 & 1492001, ANSI Z88 or national equivalent)

EYE
• Chemical goggles.
• Full face shield.

HANDS/FEET
Elbow length PVC gloves.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include
• frequency and duration of contact,
• chemical resistance of glove material,
• glove thickness and
• dexterity
Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
• When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
• When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
• Contaminated gloves should be replaced.
Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.
Application of a non-perfumed moisturiser is recommended.

OTHER
• Overalls.
• PVC Apron.

ENGINEERING CONTROLS
• Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
• Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
Corrosive.
Acid.
Reacts violently with water.

<table>
<thead>
<tr>
<th>State</th>
<th>DIVIDED SOLID</th>
<th>Molecular Weight</th>
<th>183.63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Range (°F)</td>
<td>293- 300</td>
<td>Viscosity</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Range (°F)</td>
<td>356 (20 hPa)</td>
<td>Solubility in water (g/L)</td>
<td>Reacts</td>
</tr>
<tr>
<td>Flash Point (°F)</td>
<td>Not Available</td>
<td>pH (1% solution)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Decomposition Temp (°F)</td>
<td>Not Available</td>
<td>pH (as supplied)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Autoignition Temp (°F)</td>
<td>Not Available</td>
<td>Vapour Pressure (mmHG)</td>
<td>Negligible</td>
</tr>
</tbody>
</table>
### Section 10 - CHEMICAL STABILITY

**CONDITIONS CONTRIBUTING TO INSTABILITY**
- Contact with alkaline material liberates heat
- Presence of incompatible materials.
- Product is considered stable.

**STORAGE INCOMPATIBILITY**
- Hydrogen chloride
  - reacts strongly with strong oxidisers (releasing chlorine gas), acetic anhydride, caesium cyanotridehydrodecaborate(2-), ethylidene difluoride, hexalithium disilicide, metal acetylide, sodium, silicon dioxide, tetrastilium 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 phosphate, carbides, carbonates, cyanides, chlorosulfonic acid, ethylenediamine, ethyleneimine, epichlorohydrin, formaldehyde, isocyanates, metals, metal oxides, metal hydrides, metal acetylides, metal carbides, oleum, organic anhydrides, potassium permanganate, perchloric acid, phosphides, 3-propiolactone, silicdes, sulfides, sulfites, sulfuric acid, uranium phosphate, vinyl acetate, vinylidene fluoride
- attacks most metals forming flammable hydrogen gas, and some plastics, rubbers and coatings
-Reacts with mild steel, galvanized steel / zinc producing hydrogen gas which may form an explosive mixture with air.
Segregate from alcohol, water.
Segregate from alkalis, oxidizing agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.
- Avoid strong bases.
- NOTE May develop pressure in containers; open carefully. Vent periodically.

Acyl halides tend to react violently with protic organic solvents, water, and the aprotic solvents, dimethylformamide and dimethyl sulfoxide. Their facile reaction with ethers is also potentially dangerous.<div>
For incompatible materials - refer to Section 7 - Handling and Storage.

### Section 11 - TOXICOLOGICAL INFORMATION

4-(dimethylamino)benzoyl chloride

**TOXICITY AND IRRITATION**

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by
dyspnea, cough and mucus production.

4-(DIMETHYLAMINO)BENZOYL CHLORIDE

HYDROGEN CHLORIDE

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (human) LCLo 1300 ppm/30m</td>
<td>Eye (rabbit) 5 mg/30s - Mild</td>
</tr>
<tr>
<td>Inhalation (human) LCLo 3000 ppm/5m</td>
<td></td>
</tr>
<tr>
<td>Inhalation (rat) LC50 3124 ppm/60m</td>
<td></td>
</tr>
</tbody>
</table>

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

4701 ppm/30m

Carcinogen

<table>
<thead>
<tr>
<th>Hydrogen chloride</th>
<th>International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group 1</td>
<td></td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>US ACGIH Threshold Limit Values (TLV) - Carcinogens</td>
<td>A4</td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>US - Rhode Island Hazardous Substance List</td>
<td>IARC</td>
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<tr>
<td>TWAPPM~</td>
<td>US - Maine Chemicals of High Concern List</td>
<td>A4</td>
</tr>
<tr>
<td>TWAPPM~</td>
<td>Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens</td>
<td>Notes</td>
</tr>
</tbody>
</table>

Section 12 - ECOLOGICAL INFORMATION

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

Section 13 - DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

A. General Product Information

Corrosivity characteristic: use EPA hazardous waste number D002 (waste code C)

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations. Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.
**Section 14 - TRANSPORTATION INFORMATION**

<table>
<thead>
<tr>
<th>DOT:</th>
<th></th>
<th>Hazard class or Division: 8</th>
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<tbody>
<tr>
<td>Symbols:</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Identification Numbers:</td>
<td>UN3261</td>
<td>PG: II</td>
</tr>
<tr>
<td>Label Codes:</td>
<td>8</td>
<td>Special provisions: IB8, IP2, IP4, T3, TP33</td>
</tr>
<tr>
<td>Packaging: Exceptions:</td>
<td>154</td>
<td>Packaging: Non-bulk: 212</td>
</tr>
<tr>
<td>Packaging: Exceptions:</td>
<td>154</td>
<td>Quantity limitations: Passenger aircraft/rail: 15 kg</td>
</tr>
<tr>
<td>Quantity Limitations: Cargo aircraft only:</td>
<td>50 kg</td>
<td>Vessel stowage: Location: B</td>
</tr>
<tr>
<td>Vessel stowage: Other:</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous materials descriptions and proper shipping names: Corrosive solid, acidic, organic, n.o.s.

**Air Transport IATA:**

| ICAO/IATA Class: | 8       | ICAO/IATA Subrisk: None |
| UN/ID Number:    | 3261    | Packing Group: II |
| Special provisions: | A3       | |

Cargo Only

| Packing Instructions: | 863     | Maximum Qty/Pack: 50 kg |
| Passenger and Cargo Packing Instructions: | 859     | Maximum Qty/Pack: 15 kg |
| Passenger and Cargo Limited Quantity Packing Instructions: | Y844    | Maximum Qty/Pack: 5 kg |

Shipping Name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. *(CONTAINS 4-(DIMETHYLAMINO)BENZOYL CHLORIDE)*

**Maritime Transport IMDG:**

| IMDG Class: | 8       | IMDG Subrisk: None |
| UN Number:  | 3261    | Packing Group: II |
| EMS Number: | F-A,S-B | Special provisions: 274 |
| Limited Quantities: | 1 kg | |

Shipping Name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.(contains 4-(dimethylamino)benzoyl chloride)

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**Section 15 - REGULATORY INFORMATION**

4-(dimethylamino)benzoyl chloride (CAS: 4755-50-4) is found on the following regulatory lists:

- "Canada - Alberta Ambient Air Quality Objectives"
- "Canada - Alberta Occupational Exposure Limits"
- "Canada - British Columbia Occupational Exposure Limits"
- "Canada - Northwest Territories Occupational Exposure Limits (English)"
- "Canada - Nova Scotia Occupational Exposure Limits"
- "Canada - Prince Edward Island Occupational Exposure Limits"
- "Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens"
- "Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)"
- "Canada - Saskatchewan Industrial Hazardous Substances"
- "Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits"
- "Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances"
- "Canada Domestic Substances List (DSL)"
- "Canada Ingredient Disclosure List (SOR/88-64)"
- "Canada National Pollutant Release Inventory (NPRI)"
- "Canada Prohibited Toxic Substances, Schedule 2, Concentration Limits (English)"
- "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)"
- "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP"
- "GESAMP/EHS Composite List - GESAMP Hazard Profiles"
- "IMO IBC Code
hydrogen chloride (CAS: 7647-01-0) is found on the following regulatory lists:


Regulations for ingredients
Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

- Cumulative effects may result following exposure*.
- *(limited evidence).

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- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at: www.chemwatch.net/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. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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