1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name 2,6-Dichlorobenzonitrile
Product Code SC-254376

Recommended use of the chemical and restrictions on use
For research use only. Not intended for diagnostic or therapeutic use.

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification
Acute toxicity - Dermal Category 4

Label elements
Signal word Warning
Hazard statements Harmful in contact with skin
Symbols/Pictograms

Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
Dispose of contents/container to an approved waste disposal plant

Precautionary Statements - Disposal

Hazards not otherwise classified (HNOC)
Harmful in contact with skin

Other Information
Other hazards Toxic to aquatic life with long lasting effects.

NFPA Health hazards 1
Flammability 0
Stability 0
Physical and chemical properties -

HMIS Health hazards 1
Flammability 0
Physical hazards 0
Personal protection -
3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No          1194-65-6
Molecular Weight 172.01
Formula         C\(_7\)H\(_3\)Cl\(_2\)N

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>Oral LD(_{50})</th>
<th>Dermal LD(_{50})</th>
<th>Inhalation LC(_{50})</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Dichlorobenzonitrile</td>
<td>1194-65-6</td>
<td>&gt;98</td>
<td>2710 mg/kg (Rat)</td>
<td>2000 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4250 mg/kg (Rat)</td>
<td>1350 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures
General advice: If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Eye contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin Contact: Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation: Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion: Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting.

Self-protection of the first aider: Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed
Symptoms: No information available.

Indication of any immediate medical attention and special treatment needed
Note to physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: None.

Specific hazards arising from the chemical
Specific hazards arising from the chemical: Thermal decomposition can lead to release of toxic/corrosive gases and vapors.


Explosion data
Sensitivity to Mechanical Impact: No information available.
Sensitivity to Static Discharge: No information available.

Protective equipment and precautions for firefighters
Protective equipment and precautions for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Use personal protective equipment as required.

**Environmental precautions**
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment**
Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**
Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling**
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Store at room temperature.

**Incompatible materials**
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Appropriate engineering controls**

**Engineering Controls**
Showers
Eyewash stations
Ventilation systems

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Tight sealing safety goggles.

**Skin and Body Protection**
Wear protective gloves and protective clothing.

**Respiratory protection**
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**
When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES
Physical State
Solid
Appearance
No information available
Odor
No information available

**Property** | **Values**
--- | ---
pH | No information available
Melting point/freezing point | 143 °C
Boiling point | No information available
Flash point | No information available
Density | No information available
Evaporation rate | No information available
Upper flammability limits | No information available
Lower flammability limit | No information available
Vapor pressure | No information available
Vapor density | No information available
Specific gravity | No information available
Water solubility | No information available
Solubility in other solvents | No information available
Partition coefficient | No information available
Autoignition temperature | No information available
Decomposition temperature | No information available
Kinematic viscosity | No information available
Explosive properties | No information available
Oxidizing properties | No information available

10. STABILITY AND REACTIVITY

Reactivity | Not applicable
Chemical stability | Stable under recommended storage conditions.
Possibility of Hazardous Reactions | Contact with acids may liberate toxic gas.
Hazardous polymerization | No information available.
Conditions to avoid | Extremes of temperature and direct sunlight.
Incompatible materials | Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

- Inhalation | No data available.
- Eye contact | No data available.
- Skin Contact | No data available.
- Ingestion | No data available.

Information on toxicological effects

Symptoms | No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity | No information available.

Numerical measures of toxicity - Product Information

- Unknown acute toxicity | No information available
- The following values are calculated based on chapter 3.1 of the GHS document
- ATEnix (dermal) | 1100 mg/kg

12. ECOLOGICAL INFORMATION

Santa Cruz Biotechnology, Inc.  www.scbt.com
### Ecotoxicity

Toxic to aquatic life with long lasting effects

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Dichlorobenzonitrile 1194-65-6</td>
<td>-</td>
<td>3.98 - 9.07: 96 h Pimephales promelas mg/L LC50 static 3.83 - 6.34: 96 h Oncorhynchus mykiss mg/L LC50 static 9.1 - 12.3: 96 h Cyprinus carpio mg/L LC50 semi-static 5.02 - 8.98: 96 h Lepomis macrochirus mg/L LC50 static 10: 96 h Lepomis macrochirus mg/L LC50 18: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>-</td>
<td>6.2: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

### Mobility

No information available.

### 13. DISPOSAL CONSIDERATIONS

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

### 14. TRANSPORT INFORMATION

**DOT**

<table>
<thead>
<tr>
<th>UN/ID no</th>
<th>UN3077</th>
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</thead>
<tbody>
<tr>
<td>Hazard Class</td>
<td>9</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Environmentally hazardous substance, solid, n.o.s.</td>
</tr>
<tr>
<td>Description</td>
<td>UN3077, Environmentally hazardous substance, solid, n.o.s. (2,6-Dichlorobenzonitrile), 9, III</td>
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<tr>
<td>Emergency Response Guide Number</td>
<td>171</td>
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</table>

**IMDG**

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<tbody>
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<td>Hazard Class</td>
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<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Environmentally hazardous substance, solid, n.o.s.</td>
</tr>
<tr>
<td>Description</td>
<td>UN3077, Environmentally hazardous substance, solid, n.o.s. (2,6-Dichlorobenzonitrile), 9, III</td>
</tr>
<tr>
<td>Special Provisions</td>
<td>274, 335, 966, 967</td>
</tr>
<tr>
<td>EmS-No</td>
<td>F-A, S-F</td>
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</table>

**IATA**

<table>
<thead>
<tr>
<th>UN/ID no</th>
<th>UN3077</th>
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<tbody>
<tr>
<td>Hazard Class</td>
<td>9</td>
</tr>
</tbody>
</table>
Packing Group  III
Proper shipping name  Environmentally hazardous substance, solid, n.o.s.
Description  UN3077, Environmentally hazardous substance, solid, n.o.s. (2,6-Dichlorobenzonitrile), 9, III

15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists
Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC) ENCS (Japan): Philippines (PICCS)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Dichlorobenzonitrile</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute health hazard  Yes
Chronic Health Hazard  No
Fire hazard  No
Sudden release of pressure hazard  No
Reactive hazard  No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Dichlorobenzonitrile</td>
<td>100 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Dichlorobenzonitrile</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Revision note  No information available
Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the
date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,
transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to
the specific material designated and may not be valid for such material used in combination with any other materials or in any
process, unless specified in the text.

End of Safety Data Sheet