MATERIAL SAFETY DATA SHEET

2-CHLORO-5-CHLOROMETHYL THIAZOLE

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SECTION 2 - HAZARDS IDENTIFICATION

Hazard Symbol: Xn
Risk Phrases:
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
R41 - Risk of serious damage to eyes.
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H318 - Causes serious eye damage.
H332 - Harmful if inhaled
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
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

SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Assay (%)</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>105827-91-6</td>
<td>2-Chloro-5-chloromethyl thiazole</td>
<td>min. 98</td>
<td>-</td>
</tr>
</tbody>
</table>

SECTION 4 - FIRST AID MEASURES

Eyes: Rinse opened eye for at least 15 minutes under running water. Get medical aid.
Skin: Instantly wash with water and soap and rinse thoroughly. Get medical aid.
Ingestion: Wash mouth out with water. Get medical aid.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If required, provide artificial respiration.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable extinguishing agents: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide or appropriate foam.
Protective equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin/eyes.
Unusual fire and explosions hazards: During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Person-related safety precautions: Wear protective equipment as indicated in section 8. Ensure adequate ventilation. Avoid dust formation.
Environmental precautions: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash spill site after material pickup is complete.
Additional information: Should not be released into the environment.
See Section 7 for information on safe handling. See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

SECTION 7 - HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Avoid dust formation.
Storage: Store in a dry, cool and well ventilated place. Keep container closed when not in use. See Section 10 for stability and reactivity information.
SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels. Safety shower and eye bath.

**Personal Protective Equipment**

**Eyes:** Wear chemical safety glasses.

**Skin:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Clothing:** Wear appropriate protective work clothing.

**Respirators:** Use breathing protection with high concentrations.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td><strong>State:</strong></td>
<td>Crystals</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>Pale yellow / brown</td>
</tr>
<tr>
<td><strong>Boiling Point:</strong></td>
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</tr>
<tr>
<td><strong>Freezing/Melting Point:</strong></td>
<td>30 °C</td>
</tr>
<tr>
<td><strong>Flash Point:</strong></td>
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<tr>
<td><strong>Specific Gravity/Density:</strong></td>
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<tr>
<td><strong>Refractive Index:</strong></td>
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<tr>
<td><strong>Molecular Formula:</strong></td>
<td>C₄H₃Cl₂NS</td>
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<tr>
<td><strong>Molecular Weight:</strong></td>
<td>168.04</td>
</tr>
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</table>

SECTION 10 - STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal temperatures and pressures.

**Incompatible Materials:** Strong oxidants

**Conditions to avoid:** Incompatible products.

**Hazardous Decomposition Products:** Carbon oxides, nitrogen oxides, oxides of sulfur, hydrogen chloride

SECTION 11 - TOXICOLOGICAL INFORMATION

**Carcinogenicity:** There are no known carcinogenic chemicals in this product. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**Potential Health Effects:** Inhalation may cause respiratory irritation. May be harmful if inhaled, swallowed or absorbed through skin.

**Other:** The toxicological properties have not been fully investigated.

SECTION 12 - ECOLOGICAL INFORMATION

Do not let product enter drains.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

SECTION 15 - REGULATORY INFORMATION

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

- **Hazard Symbols:** Xn - harmful
- **Risk Phrases:** R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
  - R41 - Risk of serious damage to eyes.
- **Safety Phrases:** S26 - In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
  - S39 - Wear eye/face protection.

**Canadian DSL/NDSL**

- CAS# 105827-91-6 is not listed on Canada's DSL or NDSL List.

**US Federal TSCA**

- CAS# 105827-91-6 is not listed on the TSCA Inventory.

SECTION 16 - OTHER INFORMATION

**WARRANTY**

*The information contained in the MSDS are compiled according to the present knowledge of the manufacturer. It does not represent any guarantee of the properties of the product. MSDS shall be used only as a guide. Georganics Ltd. is not liable for damages incurred in the handling or contact with chemicals.*