


## SAFETY DATA SHEET

| SECTION 1: Identification of the substance/mixture and of the company/undertaking |   |
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| <b>1.1</b>  | <b>Product identifiers</b>  |
|   | Product name : 5-Chlorothiophene-2-carboxylic acid  |
|   | CAS-No. : 24065-33-6  |
| <b>1.2</b>  | <b>Relevant identified uses of the substance or mixture and uses advised against</b>  |
|   | Identified uses : Laboratory chemicals, Manufacture of substances.  |
| <b>1.3</b>  | <b>Details of the supplier of the safety data sheet</b>   |
|   | Company : Inventys Research Company Pvt LtdD-<br>514, Kanakia Zillion, BKC Annex,<br>(LBS Road Junction, CST Road, Near Kurla Bus Depot),<br>Kurla West, Mumbai 400070. INDIA Tel:+91.22.714.00.200<br>Fax:+91.22.714.00.299<br>www.Inventys.In   |
| <b>1.4</b>  | <b>Emergency telephone number</b>   |
|   | Emergency Phone # : +91 22.714.00.200   |
| SECTION 2: Hazards identification   |   |
| <b>2.1</b>  | <b>Classification of the substance or mixture</b>   |
|   | <b>Classification according to Regulation (EC) No 1272/2008</b><br>Acute toxicity, Oral (Category 4), H302<br>Serious eye damage (Category 1), H318<br>For the full text of the H-Statements mentioned in this Section, see Section 16.   |
| <b>2.2</b>  | <b>Label elements</b>   |
|   | Labelling according Regulation (EC) No 1272/2008<br>Pictogram<br><br>Signal word      Danger<br><br><b>Hazard statement(s)</b><br>H302 Harmful if swallowed.<br>H318 Causes serious eye damage.<br><br><b>Precautionary statement(s)</b><br>P264 Wash skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P280 Wear eye protection/ face protection.<br>P301 + P312: IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.<br>P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses, if present and easy to do. Continue rinsing.<br>P501: Dispose of contents/ container to an approved waste disposal plant.<br>Supplemental Hazard Statements : none<br><br>for breathing. Call a POISON CENTER/doctor if you feel unwell. |

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| Reduced Labeling (<= 125 ml)  |  |  |               |
| Pictogram    |  |  |               |
| Signal Word Danger  |  |  |               |
| Hazard statement(s)<br>H318: Causes serious eye damage.   |  |  |               |
| Precautionary statement(s)<br>P280 Wear eye protection/ face protection.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |  |  |               |
| Supplemental Hazard Statements: none  |  |  |               |
| 2.3   | <b>Other hazards</b><br>This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. |  |               |
| <b>SECTION 3: Composition/information on ingredients</b>  |  |  |               |
| 3.1   | <b>Substances</b>  |  |               |
|   | Synonyms.  | : 2-Thiophenecarboxylic acid, 5-chloro-            |               |
|   | Formula  | : C <sub>5</sub> H <sub>3</sub> ClO <sub>2</sub> S |               |
|   | Molecular weight   | : 162.59 g/mol                                     |               |
|   | CAS-No   | : 24065-33-6                                       |               |
|   | EC Number  | : 480-060-6  |               |
|   | Component  | Classification                                     | Concentration |
|   | <b>5-Chlorothiophene-2-carboxylic acid</b>   |  |               |
|   | CAS-No.: 24065-33-6  | Acute Tox. 4; Eye Dam. 1;<br>H302, H318            | <= 100 %      |
|   | EC-No.: 480-060-6  |  |               |
| For the full text of the H-Statements mentioned in this Section, see Section 16.  |  |  |               |
| <b>SECTION 4: First aid measures</b>  |  |  |               |
| 4.1   | <b>Description of first aid measures</b>   |  |               |
|   | <b>General advice</b><br>Show this material safety data sheet to the doctor in attendance.   |  |               |
|   | <b>If inhaled</b><br>After inhalation: fresh air.  |  |               |
|   | <b>In case of skin contact</b><br>In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.  |  |               |
|   | <b>In case of eye contact</b><br>After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.<br>Remove contact lenses.   |  |               |

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|   | <b>If swallowed</b><br>After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.  |
| <b>4.2</b>                                    | <b>Most important symptoms and effects, both acute and delayed</b>  |
|   | The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.  |
| <b>4.3</b>                                    | <b>Indication of any immediate medical attention and special treatment needed</b>   |
|   | No data available   |
| <b>SECTION 5: Firefighting measures</b>       |   |
| <b>5.1</b>                                    | <b>Extinguishing media</b>  |
|   | <b>Suitable extinguishing media</b><br>Water Foam Carbon dioxide (CO2) Dry powder<br><b>Unsuitable extinguishing media</b><br>For this substance/mixture no limitations of extinguishing agents are given.                                |
| <b>5.2</b>                                    | <b>Special hazards arising from the substance or mixture</b>  |
|   | Carbon oxides<br>Sulfur oxides<br>Hydrogen chloride gas<br>Combustible.<br>Development of hazardous combustion gases or vapors possible in the event of fire.   |
| <b>5.3</b>                                    | <b>Advice for firefighters</b>  |
|   | In the event of fire, wear self-contained breathing apparatus.  |
| <b>5.4</b>                                    | <b>Further information</b>  |
|   | Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.  |
| <b>SECTION 6: Accidental release measures</b> |   |
| <b>6.1</b>                                    | <b>Personal precautions, protective equipment and emergency procedures</b>  |
|   | Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.<br>For personal protection see section 8. |
| <b>6.2</b>                                    | <b>Environmental precautions</b>  |
|   | Do not let product enter drains.  |
| <b>6.3</b>                                    | <b>Methods and materials for containment and cleaning up</b>  |
|   | Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.                                    |
| <b>6.4</b>                                    | <b>Reference to other sections</b>  |
|   | For disposal see section 13.  |
| <b>SECTION 7: Handling and storage</b>        |   |
| <b>7.1</b>                                    | <b>Precautions for safe handling</b>  |
|   | For precautions see section 2.2   |

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| 7.2   | <b>Conditions for safe storage including any incompatibilities</b>   |
|   | <p><b>Storage conditions</b><br/>Tightly closed. Dry.</p> <p><b>Storage class</b><br/>Storage class (TRGS 510): 11: Combustible Solids</p>   |
| 7.3   | <b>Specific end use(s)</b>   |
|   | Apart from the uses mentioned in section 1.2 no other specific uses are stipulated   |
| <b>SECTION 8: Exposure controls/personal protection</b> |  |
| 8.1   | <b>Control parameters</b>  |
|   | Ingredients with workplace control parameters  |
| 8.2   | <b>Exposure controls</b>   |
|   | <p><b>Personal protective equipment</b></p> <p><b>Eye/face protection</b><br/>Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles.</p> <p><b>Skin protection</b><br/>Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.</p> <p>The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.</p> <p>Full contact<br/>Material: Nitrile rubber<br/>Minimum layer thickness: 0,11 mm<br/>Break through time: 480 min<br/>Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p> <p>Splash contact<br/>Material: Nitrile rubber<br/>Minimum layer thickness: 0,11 mm<br/>Break through time: 480 min<br/>Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p> <p>data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374<br/>If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.</p> <p><b>Body Protection</b><br/>protective clothing</p> |

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|  | <p><b>Respiratory protection</b><br/>         required when dusts are generated.<br/>         Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.<br/>         Recommended Filter type: Filter type P2</p> <p>The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.<br/>         These measures have to be properly documented.</p> <p>Control of environmental exposure: Do not let product enter drains.</p> |  |
| <b>SECTION 9: Physical and chemical properties</b> |  |  |
| <b>9.1</b>   | <b>Information on basic physical and chemical properties</b>   |  |
|  | a) Appearance  | Form: solid<br>Color: No data available                      |
|  | b) Odor  | No data available  |
|  | c) Odor Threshold  | No data available  |
|  | d) pH  | No data available  |
|  | e) Melting point/<br>freezing point  | Melting point/range: 154 - 158 °C - lit.                     |
|  | f) Initial boiling point<br>and boiling range  | No data available  |
|  | g) Flash point   | No Data Available  |
|  | h) Evaporation rate  | No Data Available  |
|  | i) Flammability (solid,<br>gas)  | No Data Available  |
|  | j) Upper/lower<br>flammability or<br>explosive limits  | No Data Available  |
|  | k) Vapor pressure  | No Data Available  |
|  | l) Vapor density   | No Data Available  |
|  | m) Relative density  | 1.626 at 20 °C - Regulation (EC) No. 440/2008, Annex, A.3    |
|  | n) Water solubility  | 1.01 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6 |
|  | o) Partition coefficient:<br>n octanol/water   | log Pow: 1.7 at 25 °C - Bioaccumulation is not expected..    |
|  | p) Auto-ignition<br>temperature  | No data available  |
|  | q) Decomposition<br>temperature  | No Data Available  |
|  | r) Viscosity   | No Data Available  |

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|-------------|---|-------------------|
|             | s) Explosive properties   | No Data Available |
|             | t) Oxidizing properties   | No Data Available |
| <b>9.2</b>  | <b>Other safety information</b>   |                   |
|             | Surface tension 58,38 mN/m at 20 °C<br>- Regulation (EC) No. 440/2008, Annex, A.5   |                   |
|             | <b>SECTION 10: Stability and reactivity</b>   |                   |
| <b>10.1</b> | <b>Reactivity</b>   |                   |
|             | The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.   |                   |
| <b>10.2</b> | <b>Chemical stability</b>   |                   |
|             | The product is chemically stable under standard ambient conditions (room temperature).  |                   |
| <b>10.3</b> | <b>Possibility of hazardous reactions</b>   |                   |
|             | Violent reactions possible with: strong oxidizing agents  |                   |
| <b>10.4</b> | <b>Conditions to avoid</b>  |                   |
|             | No information available  |                   |
| <b>10.5</b> | <b>Incompatible materials</b>   |                   |
|             | No data available   |                   |
| <b>10.6</b> | <b>Hazardous decomposition products</b>   |                   |
|             | In the event of fire: see section 5   |                   |
|             | <b>SECTION 11: Toxicological information</b>  |                   |
| <b>11.1</b> | <b>Information on toxicological effects</b>   |                   |
|             | <p><b>Acute toxicity</b><br/>           LD50 Oral - Rat - female - 300 - 2.000 mg/kg<br/>           (OECD Test Guideline 423)<br/>           Inhalation: No data available<br/>           LD50 Dermal - Rat - male and female - &gt; 2.000 mg/kg<br/>           (OECD Test Guideline 402)</p> <p><b>Skin corrosion/irritation</b><br/>           Skin - Rabbit<br/>           Result: No skin irritation - 4 h<br/>           (OECD Test Guideline 404)</p> <p><b>Serious eye damage/eye irritation</b><br/>           Eyes - Rabbit<br/>           Result: Irreversible effects on the eye - 24 h<br/>           (OECD Test Guideline 405)</p> <p><b>Respiratory or skin sensitisation</b><br/>           Local lymph node assay (LLNA) - Mouse<br/>           Result: negative<br/>           (OECD Test Guideline 429)</p> <p><b>Germ cell mutagenicity</b><br/>           Test Type: Chromosome aberration test in vitro<br/>           Test system: Chinese hamster lung cells<br/>           Metabolic activation: with and without metabolic activation<br/>           Method: OECD Test Guideline 473</p> |                   |

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|   | <p>Result: negative<br/>           Test Type: Ames test<br/>           Test system: S. typhimurium<br/>           Metabolic activation: with and without metabolic activation<br/>           Method: OECD Test Guideline 471<br/>           Result: negative<br/> <b>Carcinogenicity</b><br/>           No data available<br/> <b>Reproductive toxicity</b><br/>           No data available.<br/> <b>Specific target organ toxicity - single exposure</b><br/>           No data available<br/> <b>Specific target organ toxicity - repeated exposure</b><br/>           No data available<br/> <b>Aspiration hazard</b><br/>           No data available</p>  |
| 11.2                                      | <p><b>Additional Information</b><br/> <b>Endocrine disrupting properties</b><br/> <b>Product:</b><br/> <b>Assessment :</b> The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.<br/><br/> <b>Repeated dose toxicity - Rat - male and female - Gavage - 28 d - NOAEL (No observed adverse effect level) - 50 mg/kg</b><br/><br/> <b>RTECS: XM8400000</b><br/>           To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.</p> |
| <b>SECTION 12: Ecological information</b> |   |
| 12.1                                      | <b>Toxicity</b>   |
|   | <p>Toxicity to fish static test LC50 - Danio rerio (zebra fish) - &gt; 100 mg/l - 96 h (OECD Test Guideline 203)</p> <p>Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - &gt; 100 mg/l - 48 h (OECD Test Guideline 202)</p> <p>Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - &gt; 100 mg/l - 72 h (OECD Test Guideline 201)</p> <p>Toxicity to bacteria static test EC50 - activated sludge - 737,2 mg/l - 3 h (OECD Test Guideline 209)</p>   |
| 12.2                                      | <b>Persistence and degradability</b>  |
|   | Biodegradability aerobic - Exposure time 28 d Result: 2 % - Not readily biodegradable. (OECD Test Guideline 301D)   |
| 12.3                                      | <b>Bio accumulative potential</b>   |
|   | No data available   |
| 12.4                                      | <b>Mobility in soil</b>   |







## 5-Chlorothiophene-2-carboxylic acid

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### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No.1907/2006.

#### Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

#### Further information

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