SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

	Product name	:	5-Chlorothiophene-2-carboxylic acid
	CAS-No.	:	24065-33-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

	Identified uses	:	Laboratory chemicals, Manufacture of substances.

1.3 Details of the supplier of the safety data sheet

	Company	:	Inventys Research Company Pvt LtdD- 514, Kanakia Zillion, BKC Annex, (LBS Road Junction, CST Road, Near Kurla Bus Depot), Kurla West, Mumbai 400070. INDIA Tel:+91.22.714.00.200 Fax:+91.22.714.00.299 www.Inventys.In

1.4 Emergency telephone number

	Emergency Phone #	:	+91 22.714.00.200

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Serious eye damage (Category 1), H318
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word Danger

Hazard statement(s)
H302 Harmful if swallowed.
H318 Causes serious eye damage.

Precautionary statement(s)
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear eye protection/ face protection.
P301 + P312: IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501: Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Statements : none

for breathing. Call a POISON CENTER/doctor if you feel unwell.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Danger

Hazard statement(s)
H318: Causes serious eye damage.

Precautionary statement(s)
P280 Wear eye protection/ face protection.
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 Other hazards

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms.	:	2-Thiophenecarboxylic acid, 5-chloro-
Formula	:	$C_5H_3ClO_2S$
Molecular weight	:	162.59 g/mol
CAS-No	:	24065-33-6
EC Number	:	480-060-6

Component	Classification	Concentration
5-Chlorothiophene-2-carboxylic acid		
CAS-No.: 24065-33-6 EC-No.: 480-060-6	Acute Tox. 4; Eye Dam. 1; H302, H318	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Show this material safety data sheet to the doctor in attendance.
If inhaled
After inhalation: fresh air.
In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

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

7.2	**Conditions for safe storage including any incompatibilities**
	Storage conditions Tightly closed. Dry. **Storage class** Storage class (TRGS 510): 11: Combustible Solids
7.3	**Specific end use(s)**
	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1	**Control parameters** Ingredients with workplace control parameters
8.2	**Exposure controls**
	Personal protective equipment **Eye/face protection** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles. **Skin protection** 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. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 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. **Body Protection** protective clothing

	Respiratory protection required when dusts are generated. 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. Recommended Filter type: Filter type P2 The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure: Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

	a) Appearance	Form: solid Color: No data available
	b) Odor	No data available
	c) Odor Threshold	No data available
	d) pH	No data available
	e) Melting point/ freezing point	Melting point/range: 154 - 158 °C - lit.
	f) Initial boiling point and boiling range	No data available
	g) Flash point	No Data Available
	h) Evaporation rate	No Data Available
	i) Flammability (solid, gas)	No Data Available
	j) Upper/lower flammability or 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: n octanol/water	log Pow: 1.7 at 25 °C - Bioaccumulation is not expected..
	p) Auto-ignition temperature	No data available
	q) Decomposition temperature	No Data Available
	r) Viscosity	No Data Available

	s) Explosive properties	No Data Available
	t) Oxidizing properties	No Data Available
9.2	**Other safety information**	
	Surface tension 58,38 mN/m at 20 °C - Regulation (EC) No. 440/2008, Annex, A.5	

SECTION 10: Stability and reactivity

10.1	**Reactivity**
	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.
10.2	**Chemical stability**
	The product is chemically stable under standard ambient conditions (room temperature).
10.3	**Possibility of hazardous reactions**
	Violent reactions possible with: strong oxidizing agents
10.4	**Conditions to avoid**
	No information available
10.5	**Incompatible materials**
	No data available
10.6	**Hazardous decomposition products**
	In the event of fire: see section 5

SECTION 11: Toxicological information

11.1	**Information on toxicological effects**

Acute toxicity
LD50 Oral - Rat - female - 300 - 2.000 mg/kg
(OECD Test Guideline 423)
Inhalation: No data available
LD50 Dermal - Rat - male and female - > 2.000 mg/kg
(OECD Test Guideline 402)
Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)
Serious eye damage/eye irritation
Eyes - Rabbit
Result: Irreversible effects on the eye - 24 h
(OECD Test Guideline 405)
Respiratory or skin sensitisation
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)
Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473

	Result: negative Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative **Carcinogenicity** No data available **Reproductive toxicity** No data available. **Specific target organ toxicity - single exposure** No data available **Specific target organ toxicity - repeated exposure** No data available **Aspiration hazard** No data available
11.2	**Additional Information** **Endocrine disrupting properties** **Product:** **Assessment** : 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. **Repeated dose toxicity -** Rat - male and female - Gavage - 28 d - NOAEL (No observed adverse effect level) - 50 mg/kg **RTECS: XM8400000** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated**.**

SECTION 12: Ecological information

12.1	**Toxicity**
	Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201) Toxicity to bacteria static test EC50 - activated sludge - 737,2 mg/l - 3 h (OECD Test Guideline 209)
12.2	**Persistence and degradability**
	Biodegradability aerobic - Exposure time 28 d Result: 2 % - Not readily biodegradable. (OECD Test Guideline 301D)
12.3	**Bio accumulative potential**
	No data available
12.4	**Mobility in soil**

	No data available
12.5	**Results of PBT and vPvB assessment**
	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.
12.6	**Endocrine disrupting properties**
	Product: Assessment: 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.
12.7	**Other adverse effects**
	No data available

SECTION 13: Disposal considerations

13.1	**Waste treatment methods**
	Waste treatment methods **Product** See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1	**UN number**		
	ADR/RID: -	IMDG: -	IATA: -
14.2	**UN proper shipping name**		
	ADR/RID: : Not dangerous goods IMDG: : Not dangerous goods IATA: : Not dangerous goods		
14.3	**Transport hazard class(es)**		
	ADR/RID: -	IMDG: -	IATA: -
14.4	**Packing Group**		
	ADR/RID: -	IMDG: -	IATA: -
14.5	**Environmental Hazards**		
	ADR/RID: no	IMDG Marine pollutant: no	IATA: no
14.6	**Special Precautions for User**		
	No data available Further information: Not classified as dangerous in the meaning of transport regulations.		

SECTION 15: Regulatory information

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

 The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.
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