



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification

#### 1.1 Product identifiers

**Product Name :** 1-chloropentane  
**Cat No.:** AC218570000; AC218570050; AC218571000; AC218575000  
**CAS No. :** 543-59-9

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

**Recommended uses :** Laboratory chemicals  
**Uses advised against:** Food, drug, pesticide or biocidal product use.

#### 1.3 Details of the supplier of the safety data sheet

**Company :** Krishna Solvechem Limited.  
B/503, Shayog, S. V. Road,  
Kandivali (West), Mumbai – 400067. India.  
**Telephone :** +91-22-6123 0222  
**Email :** [exports@kscl.co.in](mailto:exports@kscl.co.in)

#### 1.4 Emergency telephone number

**Emergency Phone :** +91-8657457330

### SECTION 2: Hazards identification

#### 2.1 Classification

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

Acute oral toxicity	(Category 4)
Acute dermal toxicity	(Category 4)
Acute inhalation Toxicity – Vapors	(Category 4)
Flammable liquids	(Category 2)

#### 2.2 Label elements

**Pictogram :**



**Signal word**

Danger

**Hazard statement (s)**

Highly flammable liquid and vapor



**Precautionary statement (s)**

**Prevention**

Harmful if swallowed, in contact with skin or if inhaled

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Do not eat, drink or smoke when using this product

Keep away from heat/sparks/open flames/hot surfaces – no smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use only non – sparking tools

Take precautionary measures against static discharge

**Inhalation :**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**IF ON SKIN (or hair):**

If skin irritation occurs: Get medical advice/attention

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.

**Storage:**

Store locked up Store in a well-ventilated place.

Keep cool.



	<b>Disposal:</b> Dispose of contents/container to an approved waste disposal plant
<b>Hazards not otherwise classified (HNOC)</b>	None identified

### SECTION 3: Composition / information on ingredients

**3.1**

Component	CAS-No	Weight %
Amyl chloride	543-59-9	<=100

### SECTION 4: First aid measures

**4.1 Description of first aid measures**

<b>General Advice:</b>	If symptoms persist, call a physician
<b>If inhalation :</b>	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
<b>In case of skin contact :</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
<b>In case of eye contact :</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion :</b>	Clean mouth with water and drink afterwards plenty of water
<b>4.2 Most important symptoms and effects :</b>	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
<b>4.3 Notes to Physician :</b>	Treat symptomatically

### SECTION 5: Firefighting effects

**5.1 Extinguishing media**

<b>Suitable extinguishing media :</b>	Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers
<b>Unsuitable Extinguishing Media: :</b>	No information available
<b>5.2 Flash Point :</b>	11 °C / 51.8 °F
<b>Method :</b>	No information available



<b>Autoignition Temperature:</b>	220 °C / 428 °F								
<b>Explosion Limits:</b>									
<b>Upper</b>	8.60%								
<b>Lower</b>	1.40%								
<b>Sensitivity to Mechanical Impact</b>	No information available								
<b>Sensitivity to Static Discharge</b>	No information available								
<b>Specific Hazards Arising from the Chemical :</b>	Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.								
<b>Hazardous Combustion Products :</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Hydrogen chloride gas								
<b>5.4 Protective Equipment and Precautions for Firefighters:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.								
<b><u>NFPA:</u></b>	<table border="1"> <thead> <tr> <th>Health</th> <th>Flammability</th> <th>Instability</th> <th>Physical hazards</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>3</td> <td>0</td> <td>N/A</td> </tr> </tbody> </table>	Health	Flammability	Instability	Physical hazards	2	3	0	N/A
Health	Flammability	Instability	Physical hazards						
2	3	0	N/A						

## SECTION 6: Accidental release measures

<b>6.1 Personal precautions, protective equipment and emergency procedures</b>	Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.
<b>6.2 Environmental precautions</b>	Should not be released into the environment.
<b>6.3 Methods and materials for containment and cleaning up</b>	Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark – proof tools and explosion – proof equipment

## SECTION 7: Handling and storage

<b>7.1 Precautions for safe handling</b>	Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.
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## 7.2 Conditions for safe storage

Keep container tightly closed. Keep in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Incompatible Materials. Strong oxidizing agents. Strong bases.

## SECTION 8: Exposure controls/personal protection

### 8.1 Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

### 8.2 Exposure controls

#### Personal protective equipment -

##### Eye / Face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

##### Skin protection and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

##### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

##### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice..

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: Liquid, colorless
b) Odour	sweet
c) Odour Threshold	No information available
d) pH	No information available
e) Melting point / freezing point	-60 °C / -76 °F
f) Initial boiling point and	107 - 108 °C / 224.6 - 226.4 °F



<b>boiling range</b>	
<b>g) Flash point</b>	11 °C / 51.8 °F
<b>h) Evaporation rate</b>	No information available
<b>i) Flammability (solid, gas)</b>	Not applicable
<b>j) Upper/lower flammability or explosive limits</b>	upper: 8.60% lower: 1.40%
<b>k) Vapour pressure</b>	27 mbar @ 20 °C
<b>l) Vapour density</b>	3.68
<b>m) Specific Gravity</b>	0.880
<b>n) Solubility</b>	Practically insoluble
<b>o) Partition coefficient: n octanol/water</b>	No data available
<b>p) Auto-ignition temperature</b>	220 °C / 428 °F
<b>q) Decomposition temperature</b>	No information available
<b>r) Viscosity</b>	0.59 mPa s at 20 °C
<b>s) Molecular formula</b>	C5 H11 Cl
<b>t) Molecular Weight</b>	106.59

### SECTION 10: Stability and Reactivity

<b>10.1 Reactive Hazard :</b>	None known, based on information available
<b>10.2 Chemical stability :</b>	Stable under normal conditions
<b>10.3 Possibility of hazardous reactions :</b>	None under normal processing.
<b>10.4 Conditions to avoid :</b>	Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.
<b>10.5 Incompatible materials:</b>	Strong oxidizing agents, Strong bases
<b>10.6 Hazardous decomposition products :</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrogen chloride gas
<b>10.7 Hazardous Polymerization</b>	Hazardous polymerization does not occur



## SECTION 11: Toxicological information

### 11.1

#### Information on toxicological effects

##### Acute toxicity:

##### Product Information:

##### Component Information

**Toxicologically Synergistic Products** No information available

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

**Irritation :** No information available

**Sensitization:** No information available

**Carcinogenicity :** The table below indicates whether each agency has Any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Amyl chloride	543-59-9	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects:** No information available

**Reproductive Effects:** No information available.

**Developmental Effects :** No information available.

**Teratogenicity:** No information available.

**STOT - single exposure :** None known

**STOT - repeated exposure:** None known

**Aspiration hazard :** No information available.

**Symptoms / effects, both acute and delayed:** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

**Endocrine Disruptor Information :** No information available

**Other Adverse Effects :** The toxicological properties have not been Fully investigated.



## SECTION 12: Ecological information

### 12.1

**Ecotoxicity:** Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Amyl chloride	Not listed	Not listed	EC50 = 227 mg/L 5 min EC50 = 245 mg/L 30 min	Not listed

**12.2 Persistence and degradability:** Soluble in water Persistence is unlikely based on information available. Insoluble in water

**Bioaccumulation/ Accumulation** No information available

**12.3 Mobility:** Will likely be mobile in the environment due to its water solubility. will likely mobile in the environment due to its volatility.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## SECTION 14: Transport information

### 14.1 UN number :

DOT : UN1107                      TDG : UN1107  
IATA : UN1107                    IMDG : UN1107

### 14.2 UN proper shipping name

IATA :                                  AMYL CHLORIDE  
IMDG :                                AMYL CHLORIDES

**14.3 Transport hazard class(es)**    DOT: 3            TDG: 3            IATA: 3            IMDG: 3

**14.4 Packaging group:**                    DOT: II            TDG: II            IATA: II            IMDG: II

## SECTION 15: Regulatory information

### 15.1 United states of America Inventory:

Component	CAS-No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
Amyl chloride	543-59-9	X	ACTIVE	-

**Legend:**





**TSCA - Toxic Substances Control Act, (40 CFR Part 710)**

X - Listed

'-' - Not Listed

**TSCA 12(b) - Notices of Export** Not applicable

**International Inventories:**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Amyl chloride	543-59-9	-	X	208-846-4	X	-	X	X	-	-

**U.S. Federal Regulations**

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA** Not applicable

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

**15.2 U.S. State Right-to-Know Regulations:**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Amyl chloride	X	X	X	-	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N



**U.S. Department of Homeland Security** - This product does not contain the any DHS Chemicals.

**Other International Regulations**

**Mexico – Grade** No information available

**Authorization/Restrictions according to EU REACH**

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

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Amyl chloride	543-59-9	Not applicable	Not applicable	Not applicable	Not applicable
Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Amyl chloride	543-59-9	Not applicable	Not applicable	Not applicable	Annex I -Y45

**SECTION 16: Other information**

**16.1 Prepared By:** Regulatory affairs  
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**Creation Date:** 24-Nov-2010  
**Revision Date:** 24-Dec-2022  
**Print Date:** 24-Dec-2022  
**Revision Summary:** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 C FR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**16.2 Disclaimer:**

The information provided in this 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 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.