



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification

#### 1.1 Product identifiers

**Product Name :** Methyl 2-bromopropionate  
**Cat No.:** AC173390000; AC173391000; AC173395000  
**CAS No. :** 5445-17-0

#### 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, Sahayog, S. V. Road,  
Kandivali (West), Mumbai – 400067. India.  
**Telephone :** +91-22-6123 0222  
**Email :** 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)

Flammable liquids	(Category 3)
Skin Corrosion/Irritation	(Category 1 B)
Serious Eye Damage/Eye Irritation	(Category 1)
Specific target organ toxicity (single exposure)	(Category 3)
Target Organs - Respiratory system.	

#### 2.2 Label elements

**Pictogram :**



**Signal word**

Danger

**Hazard statement (s)**

Flammable liquid and vapor



**Precautionary statement (s)**

**Prevention**

Causes severe skin burns and eye damage  
May cause respiratory irritation

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  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

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

**Eyes:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Ingestion:**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

**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 container tightly closed



<b>Hazards not otherwise classified (HNOC)</b>	<p><b>Disposal:</b> Dispose of contents/container to an approved waste disposal plant</p> <p>Lachrymator (substance which increases the flow of tears)</p>
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### SECTION 3: Composition / information on ingredients

**3.1**

Component	CAS-No	Weight %
Propanoic acid,2-bromo-,methyl ester	5445-17-0	>95

### SECTION 4: First aid measures

**4.1 Description of first aid measures**

<b>General Advice:</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
<b>If inhalation :</b>	Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately. If not breathing, give artificial respiration.
<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. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.
<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>	51 °C / 123.8 °F
<b>Method :</b>	No information available



<b>Autoignition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<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>	Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. 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 halides Thermal decomposition can lead to release of irritating gases and vapors

**5.4 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.

**NFPA:**

Health	Flammability	Instability	Physical hazards
3	2	0	N/A

**SECTION 6: Accidental release measures**

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

Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges

**6.2 Environmental precautions**

Should not be released into the environment.

**6.3 Methods and materials for containment and cleaning up**

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**

**7.1 Precautions for safe handling**



measures against static discharges.

## 7.2 Conditions for safe storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Keep away from heat, sparks and flame. Incompatible Materials. Acids. Bases. Reducing Agent. Oxidizing agent.

## 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

Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

### 8.2 Exposure controls

#### Personal protective equipment -

##### Eye / Face protection

Tight sealing safety goggles. Face protection shield.

##### 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	Light yellow Liquid
b) Odour	Odorless
c) Odour Threshold	No information available
d) pH	No information available
e) Melting point / freezing point	No information available
f) Initial boiling point and	143 - 145 °C / 289.4 - 293 °F @ 19 mmHg



<b>boiling range</b>	
<b>g) Flash point</b>	51 °C / 123.8 °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>	No data available No data available
<b>k) Vapour pressure</b>	No data available
<b>l) Vapour density</b>	5.76
<b>m) Specific Gravity</b>	1.497
<b>n) Solubility</b>	Immiscible
<b>o) Partition coefficient: n octanol/water</b>	No data available
<b>p) Auto-ignition temperature</b>	No information available
<b>q) Decomposition temperature</b>	No information available
<b>r) Viscosity</b>	No information available
<b>s) Molecular formula</b>	C4 H7 Br O2
<b>t) Molecular Weight</b>	167

### 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. Excess heat. Incompatible products.
<b>10.5 Incompatible materials:</b>	Acids, Bases, Reducing Agent, Oxidizing agent
<b>10.6 Hazardous decomposition products :</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrogen halides. Thermal decomposition can lead to release of irritating gases and vapors
<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:** No acute toxicity information is available for this product

##### **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
Propanoic acid,2-bromo-,methyl ester	5445-17-0	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 :** Respiratory system

**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 flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

**12.2 Persistence and degradability:** Persistence is unlikely

**Bioaccumulation/  
Accumulation** No information available

**12.3 Mobility:** Will likely be mobile in the environment due to its water solubility. **Log Pow:** 1.13

## 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: UN2920                      TDG: UN2920  
IATA: UN2920                    IMDG: UN2920

### 14.2 UN proper shipping name

**DOT :** CORROSIVE LIQUIDS, FLAMMABLE, N. O. S.  
**TDG :** CORROSIVE LIQUIDS, FLAMMABLE, N. O. S.  
**IMDG :** CORROSIVE LIQUIDS, FLAMMABLE, N. O. S.  
**IATA :** CORROSIVE LIQUIDS, FLAMMABLE, N. O. S.

**14.3 Transport hazard class(es)** DOT: 8                      TDG: 8                      IMDG: 8                      IATA: 8

**14.4 Packaging group:** DOT: II                      TDG: II                      IMDG: II                      IATA: 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
Propanoic acid,2-bromo-,methyl ester	5445-17-0	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), Japan (ISHL), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Propanoic acid, 2-bromo-, methyl ester	5445-17-0	-	X	226-642-3	X	X	X	X	X	KE-03709

**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:**

Not applicable

**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

**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)
Propanoic acid, 2-bromo-, methyl ester	5445-17-0	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)
Propanoic acid, 2-bromo-, methyl ester	5445-17-0	Not applicable	Not applicable	Not applicable	Not applicable

**SECTION 16: Other information**

**16.1 Prepared By:** Regulatory affairs  
Krishna Solvechem  
Limited

**Email:** exports@kscl.co.in

**Revision Date:** 24-Dec-2023

**Print Date:** 24-Dec-2023

**Revision Summary:** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 C F R 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.