



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : Propionyl chloride
Cat No.: AC131530000; AC131530025; AC131530250; AC131532500;
AC131535000
CAS No. : 79-03-8

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

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 2)
Acute oral toxicity	(Category 4)
Acute inhalation toxicity – vapors	(Category 3)
Skin Corrosion/Irritation	(Category 1B)
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)

Highly flammable liquid and vapor



Precautionary statement (s)

Prevention

Harmful if swallowed
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
Do not eat, drink or smoke when using this product
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 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

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

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Ingestion:

Rinse mouth. Do NOT induce vomiting

Storage:

Store locked up
Store in a well-ventilated place.
Keep container tightly closed

Disposal:

Dispose of contents/container to an approved waste disposal plant



Hazards not otherwise classified (HNOC)

Reacts violently with water

SECTION 3: Composition / information on ingredients

3.1

Component	CAS-No	Weight %
1-Bromo-2-methylpropane (By GC)	78-77-3	98% Minimum

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhalation :	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. 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. Immediate medical attention is required.
In case of skin contact :	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact :	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion :	Clean mouth with water and drink afterwards plenty of water.
4.2 Most important symptoms and effects :	Difficulty in breathing. Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
4.3 Notes to Physician :	Treat symptomatically

SECTION 5: Firefighting effects

5.1 Extinguishing media

Suitable extinguishing media :	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media:	DO NOT USE WATER
5.2 Flash Point :	11 °C / 51.8 °F
Method :	No information available



Autoignition Temperature:	270 °C / 518 °F
Explosion Limits:	
Upper	11.90 vol%
Lower	3.60 vol%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available
Specific Hazards Arising from the Chemical :	Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Contact with water liberates toxic gas.
Hazardous Combustion Products :	Carbon monoxide (CO). Carbon dioxide (CO ₂). Hydrogen chloride gas

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	3	2	W

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges

6.2 Environmental precautions

Should not be released into the environment. See section 12 for additional Ecological Information

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

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. Take precautionary measures against static discharges. Reacts violently with water. To avoid ignition of vapors by static electricity discharge, all metal



parts of the equipment must be grounded.

7.2 Conditions for safe storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat, sparks and flame. Keep away from water or moist air. Incompatible Materials. Strong oxidizing agents. Bases. Alcohols. Amines.

SECTION 8: Exposure controls/personal protection

8.1 Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Phosgene	TWA: 0.1 ppm	(Vacated) TWA: 0.1 ppm (Vacated) TWA: 0.4 mg/m ³ TWA: 0.1 ppm TWA: 0.4 mg/m ³	IDLH: 2 ppm TWA: 0.1 ppm TWA: 0.4 mg/m ³ Ceiling: 0.2 ppm Ceiling: 0.8 mg/m ³	TWA: 0.1 ppm

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. Use only under a chemical fume hood.

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	Colorless
b) Odour	Pungent
c) Odour Threshold	No information available
d) pH	< 7
e) Melting point / freezing point	-94 °C / -137.2 °F
f) Initial boiling point and	77 - 79 °C / 170.6 - 174.2 °F @ 760 mmHg



boiling range	
g) Flash point	11 °C / 51.8 °F
h) Evaporation rate	No information available
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Upper : 11.90 vol% Lower : 3.60 vol%
k) Vapour pressure	106 mbar @ 20 °C
l) Vapour density	3.2
m) Specific Gravity	1.060
n) Solubility	Reacts with water
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	270 °C / 518 °F
q) Decomposition temperature	> 190 °C.
r) Viscosity	0.48 mPa.s @ 20°C
s) Molecular formula	C3 H5 Cl O
t) Molecular Weight	92.52

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	Yes
10.2 Chemical stability :	Reacts violently with water. Contact with water liberates toxic gas.
10.3 Possibility of hazardous reactions :	Contact with water liberates toxic gas
10.4 Conditions to avoid :	Keep away from open flames, hot surfaces and sources of ignition. Excess heat. Exposure to moist air or water. Incompatible products.
10.5 Incompatible materials:	Strong oxidizing agents, bases, Alcohols, Amines
10.6 Hazardous decomposition products :	Carbon monoxide (CO), Carbon dioxide (CO ₂), Hydrogen chloride gas
10.7 Hazardous Polymerization	Hazardous polymerization does not occur



SECTION 11: Toxicological information

11.1

Information on toxicological effects

Acute toxicity:

Product Information:

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Propionyl chloride	823 mg/kg	Not listed	LC50 2 - 10 mg/L (Rat) 4 h
Phosgene	Not listed	Not listed	LC50 = 8.6 mg/m ³ (Rat) 4 h

Toxicologically Synergistic Products No information available

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

Irritation : Causes burns by all exposure routes

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
Propionyl chloride	79-03-8	Not listed	Not listed	Not listed	Not listed	Not listed
Phosgene	75-44-5	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: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

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. Reacts with water so no ecotoxicity data for the substance is available.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Propionyl chloride	Not listed	LC50: 215-464 mg/L/96h(Brachydanio rerio)	Not listed	Not listed

12.2 Persistence and degradability: Persistence is unlikely based on information Available.

Bioaccumulation/ Accumulation No information available

12.3 Mobility: Will likely be 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 : UN1815 TDG : UN1815
IATA : UN1815 IMDG : UN1815

14.2 UN proper shipping name

DOT : PROPIONYL CHLORIDE
TDG : PROPIONYL CHLORIDE
IMDG : PROPIONYL CHLORIDE
IATA : PROPIONYL CHLORIDE

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

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 RegulatoryFlags
Propionyl chloride	79-03-8	X	ACTIVE	-
Phosgene	75-44-5	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
Propionyl chloride	79-03-8	-	X	201-170-0	X	X	X	X	X	KE-29372
Phosgene	75-44-5	X	-	200-870-3	X	X	X	X	X	KE-28456

U.S. Federal Regulations

SARA 313

Component	CAS No	Weight %	SARA 313 - Threshold Values %
Phosgene	75-44-5	<0.2	1.0

SARA 311/312 Hazard Categories

See section 2 for more information

CWA (Clean Water Act)

Not applicable

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Phosgene	X	10 lb	-	-

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Phosgene	X		-

OSHA - Occupational Safety and Health Administration

Not applicable

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Phosgene	-	TQ: 100 lb

CERCLA

Not applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
Phosgene	10 lb	10 lb

California Proposition 65
chemicals.

This product does not contain any Proposition 65

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

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Propionyl chloride	X	X	X	-	-
Phosgene	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y



DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security - This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

Other International Regulations

Mexico – Grade No information available

Component	DHS Chemical Facility Anti-Terrorism Standard
Phosgene	Release STQs - 500lbTheft STQs - 15lb

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Propionyl chloride	79-03-8	Not applicable	Not applicable	Not applicable	Not applicable
Phosgene	75-44-5	Listed	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)
Propionyl chloride	79-03-8	Not applicable	Not applicable	Not applicable	Not applicable
Phosgene	75-44-5	0.3 tonne	0.75 tonne	Not applicable	Not applicable

SECTION 16: Other information

16.1 Prepared By: Regulatory affairs
 Krishna Solvechem
 Limited
Email: exports@kscl.co.in
Creation Date: 23-Mar-2012
Revision Date: 19-Jan-2023
Print Date: 19-Jan-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.