MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : **Octanoyl chloride; Capryloyl chloride**

Cat No.: **AC129430000; AC129430025; AC129430050; AC129431000; AC129435000**

CAS No. : 111-64-8

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 Ltd.
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 4)
Corrosive to metals	(Category 1)
Acute oral toxicity	(Category 2)
Acute Inhalation Toxicity - Dusts and Mists	(Category 2)
Skin Corrosion/Irritation	(Category 2)
Serious Eye Damage/Eye Irritation	(Category 1)
Skin Sensitization	(Category 1)

2.2 Label elements

Pictogram :

Signal word Danger

Hazard statement (s)	Combustible liquid May be corrosive to metals Causes skin irritation May cause an allergic skin reaction Causes serious eye damage Fatal if inhaled
Precautionary statement (s)	
Prevention	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 Wear protective gloves/protective clothing/eye protection/face protection Keep only in original container Do not breathe dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area In case of inadequate ventilation wear respiratory protection Wash face, hands and any exposed skin thoroughly after handling Contaminated work clothing should not be allowed out of the workplace **IF IN EYES** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing Immediately call a POISON CENTER or doctor/physician **IF ON SKIN (or hair):** Wash with plenty of soap and water Take off contaminated clothing and wash before reuse If skin irritation or rash occurs: Get medical advice/attention **Fire** Fight fire with normal precautions from a reasonable distance **Spills** Absorb spillage to prevent material damage

Storage:
Store locked up
Store in corrosive resistant polypropylene container with a resistant inliner
Store in a dry place
Store in a closed container
Store in a well-ventilated place. Keep cool

Disposal:
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other hazards Stench.

SECTION 3: Composition / information on ingredients

Component	CAS-No	Weight %
Caprylyl chloride	111-64-8	>95

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhalation :	Remove to fresh air. Immediate medical attention is required. 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. If not breathing, give artificial respiration.
In case of skin contact :	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
In case of eye contact :	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Ingestion :	Do NOT induce vomiting. Get medical attention.
4.2 Most important symptoms and effects :	Difficulty in breathing. Causes burns by all exposure routes. Causes eye burns. May cause allergic skin reaction. Causes

		severe eye damage. Symptoms of overexposure may be 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: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
4.3	**Notes to Physician :**	Treat symptomatically

SECTION 5: Firefigh effects

5.1	**Extinguishing media**	
	Suitable extinguishing media :	Carbon dioxide (CO 2). Dry chemical. Chemical foam. Water mist may be used to cool closed containers.
	Unsuitable Extinguishing Media: :	No information available
5.2	**Flash Point :**	75 °C / 167 °F
	Method :	No information available
	Autoignition Temperature:	229 °C
	Explosion Limits:	
	Upper	No data available
	Lower	No data available
	Sensitivity to Mechanical Impact	No information available
	Sensitivity to Static Discharge	No information available
	Specific Hazards Arising from the Chemical :	Combustible material. Contact with water liberates toxic gas. Water reactive. Produce flammable gases on contact with water. Containers may explode when heated.
	Hazardous Combustion Products :	Carbon monoxide (CO). Carbon dioxide (CO2). Phosgene. 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**

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

See Section 12 for additional Ecological Information.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Wear self-contained breathing apparatus and protective suit. Do not expose spill to water. Do not let this chemical enter the environment. Remove all sources of ignition.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Handle product only in closed system or provide appropriate exhaust ventilation. Handle under inert gas, protect from moisture. Do not allow contact with water because of violent reaction. Keep away from open flames, hot surfaces and sources of ignition. Wear personal protective equipment/face protection.

7.2 Conditions for safe storage

Keep away from heat, sparks and flame. Corrosives area. Store under an inert atmosphere. Keep containers tightly closed in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1 Exposure Guidelines

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

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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	Light yellow, Form: Liquid
	b) Odour	pungent
	c) Odour Threshold	No information available
	d) pH	4
	e) Melting point / freezing point	-63 °C / -81.4 °F
	f) Initial boiling point and boiling range	195 °C / 383 °F @ 760 mmHg
	g) Flash point	75 °C / 167 °F
	h) Evaporation rate	No information available
	i) Flammability (solid, gas)	Not applicable
	j) Upper/lower flammability or explosive limits	No data available
	k) Vapour pressure	33 Pa @ 20 °C
	l) Vapour density	5.61
	m) Specific Gravity	0.950
	n) Solubility	No information available
	o) Partition coefficient: n octanol/water	No data available
	p) Auto-ignition temperature	229 °C
	q) Decomposition temperature	No information available
	r) Viscosity	1.51 mPa.s (20°C)

s) Molecular formula	C8 H15 Cl O
t) Molecular Weight	162.66

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	Yes
10.2 Chemical stability :	Moisture sensitive.
10.3 Possibility of hazardous reactions :	None under normal processing.
10.4 Conditions to avoid :	Heat, flames and sparks. Incompatible products. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition.
10.5 Incompatible materials:	Water, Strong oxidizing agents, Strong bases, Alcohols, Amines
10.6 Hazardous decomposition products :	Carbon monoxide (CO), Carbon dioxide (CO2), Phosgene, Hydrogen chloride gas
10.7 Hazardous Polymerization	Hazardous polymerization does not occur.

SECTION 11: Toxicological information

11.1 Acute Toxicity

Product Information

Mist LC50 Category 2. ATE = 0.05 - 0.5 mg/l

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Caprylyl chloride	>2000 mg/kg (Rat)	Not listed	0.63 mg/L/4h (Rat)

Toxicologically Synergistic Products No information Available

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

Irritation : CAUSES (SEVERE) EYE BURNS Irritating to skin

Sensitization: May cause sensitization by skin contact

Carcinogenicity : The table below indicates whether each agency ha as a

any ingredient as a Carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Caprylyl chloride	111-64-8	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:	Symptoms of overexposure may be 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: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
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
Caprylyl chloride	Not listed	LC50: 104 mg/L/96h (Pimephales promelas)	Not listed	Not listed

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.

Component	log Pow
Caprylyl chloride	2.062

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 :**	ADR/RID: 2927 IMDG: 2927 IATA: 2927		
14.2	**UN proper shipping name**			
	ADR/RID :	Toxic liquid, corrosive, organic, n.o.s.		
	IMDG :	Toxic liquid, corrosive, organic, n.o.s.		
	IATA :	Toxic liquid, corrosive, organic, n.o.s.		
14.3	**Transport hazard class(es)** **Subsidiary Hazard Class**	ADR/RID: 6.1 ADR/RID: 8	IMDG: 6.1 IMDG: 8	IATA: 6.1 IATA: 8
14.4	**Packaging group:**	ADR/RID: 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
Caprylyl chloride	111-64-8	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	AICS	IECSC	KECL
Caprylyl chloride	111-64-8	X	-	203-891-6	X	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
Caprylyl chloride	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 contains any DHS chemicals:

Other International Regulations

Mexico – Grade No information available

SECTION 16: Other information

16.1 Prepared By: **Regulatory Affairs**
Krishna Solvechem Ltd
Email: **atul@kscl.co.in**

Creation Date: **12-Jun-2007**
Revision Date: **18-Jan-2018**
Print Date: **18-Jan-2018**
Revision Summary: **This document has been updated to comply with the US OSHA**

	HazCom 2012 Standard replacing the current legislation under 29 CFR 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 a 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.