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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : Lauroyl chloride, Dodecanoyl chloride
Cat No.: AC169030000; AC169030010; AC169030500; AC169032500
CAS No. : 112-16-3

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 : atul@kscl.co.in

1.4 Emergency telephone number

Emergency Phone : +91-22-6123 0222 (10.00am - 7.00pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification

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

Skin Corrosion/Irritation	(Category 1 C)
Serious Eye Damage/Eye Irritation	(Category 1)
Skin Sensitization	(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)

Causes severe skin burns and eye damage
May cause respiratory irritation
May cause an allergic skin reaction

Precautionary



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statement (s)

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area

RESPONSE:

Immediately call a POISON CENTER or doctor/physician

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

IF INHALED:

Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF ON SKIN (or hair):

Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention

Ingestion

IF SWALLOWED: 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)

None identified

SECTION 3: Composition / information on ingredients

Component	CAS-No	Weight %
Dodecanoyl chloride	112-16-3	>95



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SECTION 4: First aid measures

4.1 Description of first aid measures	
General advice :	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
If inhalation :	If not breathing, give artificial respiration. 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.
In case of skin contact :	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.
In case of eye contact :	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Ingestion :	Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.
4.2 Most important symptoms and effects :	Causes burns by all exposure routes. May cause allergic skin reaction. 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: Firefight effects

5.1 Extinguishing media	
Suitable extinguishing media :	CO 2, dry chemical, dry sand, alcohol-resistant foam.
Unsuitable Extinguishing Media: :	No information available
5.2 Flash Point :	140 °C / 284 °F
Method :	No information available
Autoignition Temperature:	No information available
Explosion Limits:	
Upper	No information available



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<p>Lower Sensitivity to Mechanical Impact</p> <p>Sensitivity to Static Discharge</p> <p>Specific Hazards Arising from the Chemical :</p> <p>Hazardous Combustion Products :</p>	<p>No data available</p> <p>No information available</p> <p>No information available</p> <p>Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Contact with water liberates toxic gas.</p> <p>Carbon monoxide (CO). Carbon dioxide (CO₂). Phosgene. Hydrogen chloride gas</p>								
<p>5.4 Protective Equipment and Precautions for Firefighters:</p> <p>NFPA:</p>	<p>As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Health</th> <th style="text-align: center;">Flammability</th> <th style="text-align: center;">Instability</th> <th style="text-align: center;">Physical hazards</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">W</td> </tr> </tbody> </table>	Health	Flammability	Instability	Physical hazards	3	0	0	W
Health	Flammability	Instability	Physical hazards						
3	0	0	W						

SECTION 6: Accidental release measures

<p>6.1 Personal precautions, protective equipment and emergency procedures</p>	<p>Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.</p>
<p>6.2 Environmental precautions</p>	<p>Should not be released into the environment.</p>
<p>6.3 Methods and materials for containment and cleaning up</p>	<p>Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Do not expose spill to water.</p>

SECTION 7: Handling and storage

<p>7.1 Precautions for safe handling</p>	<p>Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water.</p>
<p>7.2 Conditions for safe storage</p>	<p>Protect from moisture. Corrosives area. Keep away from water or moist air. Keep containers tightly closed in a dry, cool and well-ventilated place.</p>

SECTION 8: Exposure controls/personal protection



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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. 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	Colorless, Form: Liquid
b) Odour	Pungent
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point / freezing point	Melting point/range: -17 °C / 1.4 °F
f) Initial boiling point and boiling range	134 - 137 °C / 273.2 - 278.6 °F @ 11 mmHg
g) Flash point	140 °C / 284 °F
h) Evaporation rate	No data available



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i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	7.54
m) Specific Gravity	0.920
n) Solubility	Reacts with water
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Molecular formula	C12 H23 Cl O
t) Molecular Weight	218.77

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	Yes
10.2 Chemical stability :	Stable under normal conditions. Moisture sensitive.
10.3 Possibility of hazardous reactions :	None under normal processing.
10.4 Conditions to avoid :	Incompatible products. Exposure to moist air or water. Exposure to moisture.
10.5 Incompatible materials:	Water, Strong bases, Alcohols, Amines, Metals
10.6 Hazardous decomposition products :	Carbon monoxide (CO), Carbon dioxide (CO ₂), Phosgene, Hydrogen chloride gas
10.7 Hazardous Polymerization	Hazardous polymerization does not occur.

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
<u>Acute toxicity:</u> Product Information Component Information Toxicologically Synergistic Products	No information available
<u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u>	



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Irritation :	No information available														
Sensitization:	May cause sensitization by skin contact														
Carcinogenicity : as a	The table below indicates whether each agency has classified it as a carcinogen.														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Component</th> <th style="width: 10%;">CAS-No</th> <th style="width: 10%;">IARC</th> <th style="width: 10%;">NTP</th> <th style="width: 10%;">ACGIH</th> <th style="width: 10%;">OSHA</th> <th style="width: 10%;">Mexico</th> </tr> </thead> <tbody> <tr> <td>Dodecanoyl chloride</td> <td>112-16-</td> <td>Not listed</td> <td>Not listed</td> <td>Not listed</td> <td>Not listed</td> <td>Not listed</td> </tr> </tbody> </table>		Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico	Dodecanoyl chloride	112-16-	Not listed	Not listed	Not listed	Not listed	Not listed
Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico									
Dodecanoyl chloride	112-16-	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:	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. Reacts with water so no ecotoxicity data for the substance is available.
12.2 Persistence and degradability:	Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation	No information available
12.3 Mobility:	Is not likely mobile in the environment



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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: 3265
IMDG: 3265
IATA: 3265

14.2 UN proper shipping name

ADR/RID : Corrosive liquid, acidic, organic, n.o.s.

IMDG : Corrosive liquid, acidic, organic, n.o.s.

IATA : Corrosive liquid, acidic, organic, n.o.s.

14.3 Transport hazard class(es) ADR/RID: 8 IMDG: 8 IATA: 8

14.4 Packaging group: ADR/RID: III IMDG: III IATA: III

SECTION 15: Regulatory information

15.1 United states of America Inventory:

Component	CAS-No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
Dodecanoyl chlorid	112-16-3	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
Dodecanoyl chloride	112-16-3	-	x	203-941-7	X	X	X	X	2002-3-2130

U.S. Federal Regulations

SARA 313 Not applicable



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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:

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 contains the following 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:	21-May-2010
Revision Date:	19-Jan-2018
Print Date:	19-Jan-2018
Revision Summary:	This document has been updated to comply with the US OSHA
under 29	HazCom 2012 Standard replacing the current legislation
System of	CFR 1910.1200 to align with the Globally Harmonized
	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,



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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.