

IWATSU CHEMICAL CROSS CO., LTD.**SAFETY DATA SHEET**

Data Prepared : July 18,2012

Data Revised : May 24,2023

SECTION 1. : Identification of the substance / mixture and of the company / undertaking**1.1 Product identifier**

- Product Name : **LM-CL**
- Article number : 323101005
- Product description : Not available.
- Other means of identification : Not available.

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

- Identified uses : Cleaning Liquid
- Uses advised against : Not available.

1.3 Manufacturer / Supplier

: IWATSU CHEMICAL CROSS CO.,LTD.
7-41, Kugayama 1-Choume Suginami-ku, Tokyo, 168-8501 Japan

1.4 Emergency telephone number

: Sales Dept.
TEL: +81(3)5370-5279 FAX: +81(3)5370-5494

SECTION 2 : Hazards identification**2.1 Classification of the substance or mixture**

Product definition : Mixture

- Classification according to Regulation (EC) No 1272 / 2008 [CLP/GHS]

Acute Tox. 4, H302

Skin Sens. 1, H317

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

- Ingredients of unknown toxicity

65 % of the mixture consists of component(s) of unknown acute oral toxicity

65 % of the mixture consists of component(s) of unknown acute dermal toxicity

65 % of the mixture consists of component(s) of unknown acute inhalation toxicity

- Ingredients of unknown ecotoxicity

Contains 65% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

- Hazard pictograms :
- Signal word : Warning
- Hazard statements : Harmful if swallowed.
May cause an allergic skin reaction.
- Precautionary statements
 - Prevention : Wear protective gloves. Avoid breathing vapour. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
 - Response : Take off contaminated clothing and wash it before reuse.
If on skin: Wash with plenty of water.
 - Storage : Not applicable.
 - Disposal : Not applicable.
- Hazardous ingredients : 2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester
- Supplemental label elements : Not applicable.
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.
- Special packaging requirements
 - Containers to be fitted with child-resistant fastenings : Not applicable.
 - Tactile warning of danger : Not applicable.

2.3 Other hazards

- Product meets the criteria
 - Product meets the criteria for PBT or vPvB according to Regulation (EC) No.1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
 - Other hazards which do not result in classification : None known.

SECTION 3 : Composition / information on ingredient

3.1 Chemical characterization : Mixtures

3.2 Description : Cleaning Liquid

3.3 Components

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester	CAS: 86273-46-3	≥25 - ≤50	Acute Tox. 4, H302 Skin Sens. 1, H317 See Section 16 for the full text of the H statements declared above.	[1]

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

SECTION 4 : First-aid measures

4.1 Description of first aid measures

- Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact : No specific data.
- Inhalation : No specific data.
- Skincontact
Adverse symptoms may include the following
: irritation
redness
- Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments : No specific treatment.

SECTION 5 : Fire-fighting measures**5.1 Extinguishing media**

- Suitable extinguishing media
 - : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media
 - : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture
 - : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products
 - Decomposition products may include the following materials
 - : carbon dioxide
 - carbon monoxide

5.3 Advice for firefighters

- Special protective actions for fire-fighters
 - : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters
 - : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6 : Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel
 - : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders
 - : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

- Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mopup if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
- See Section 8 for information on appropriate personal protective equipment.
- See Section 13 for additional waste treatment information.

SECTION 7 : Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Conditions for safe storage, including any incompatibilities

- Recommendations : Not available.
- Industrial sector Specific solutions : Not available.

SECTION 8 : Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

: No exposure limit value known.

• Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
2-Propenoic acid, 2-[2-(ethenoxy) ethoxy]ethyl ester	DNEL	Short term inhalation	0.005mg/m ³	General population	Systemic
	DNEL	Long term Oral	0.5g/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20mg/kg bw/day	General population	Systemic

PNECs

: No PNECs available

8.2 Exposure controls

• Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

- Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

- Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 : Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

• Physical state	: Liquid
• Colour	: Transparent
Odour	: Characteristic
Odour threshold	: Not available.
pH	: Not available.
Melting point/freezing point	: Not available.
Initial boiling point and boiling range	: Not available.
Flash point	: 122°C (251.6°F) [Estimated from the ingredient flash point]
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Upper/lower flammability or explosive limits	: Not available.
Vapour pressure	: Not available.
Vapour density	: Not available.
Relative density	: 1 to 1.2
Density	: Not available.
Solubility(ies)	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Absolute : 5 to 15 mPa·s
Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2 Other information

Solubility in water : Not available.

SECTION 10 : Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 : Toxicological information**11.1 Information on toxicological effects**Acute toxicity

- Conclusion/Summary

: Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
As the product	500	N/A	N/A	N/A	N/A
2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

- Conclusion/Summary

: Not available.

Sensitisation

Product/ingredient name	Category	Route of exposure
2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester	Category 1	SKIN

- Conclusion/Summary

: Not available.

Mutagenicity

- Conclusion/Summary : Not available.

Carcinogenicity

- Conclusion/Summary : Not available.

Reproductive toxicity : Not available.

- Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

: Not available.

Specific target organ toxicity (repeated exposure)

: Not available.

Aspiration hazard : Not available.Information on likely routes of exposure

: Not available.

Potential acute health effects

- Eye contact : No known significant effects or critical hazards.
- Inhalation : No known significant effects or critical hazards.
- Skin contact : May cause an allergic skin reaction.
- Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact : No specific data.
- Inhalation : No specific data.
- Skin contact : Adverse symptoms may include the following
irritation
redness
- Ingestion : No specific data.

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

- Potential immediate effects : Not available.
- Potential delayed effects : Not available.

Long term exposure

- Potential immediate effects : Not available.
- Potential delayed effects : Not available.

Potential chronic health effects

- Conclusion/Summary : Not available.
- General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity : No known significant effects or critical hazards.
- Mutagenicity : No known significant effects or critical hazards.
- Teratogenicity : No known significant effects or critical hazards.
- Developmental effects : No known significant effects or critical hazards.
- Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12 : Ecological information**12.1 Toxicity**

- Conclusion/Summary : Not available.

12.2 Persistence and degradability

- Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester	1.7	—	low

12.4 Mobility in soil

- Soil/water partition coefficient (KOC)
: Not available.
- Mobility
: Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13 : Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

- Methods of disposal : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

- Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

- Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14 : Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	—	—	—	—
14.3 Transport hazard class(es)	—	—	—	—
14.4 Packing group				
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user

: Carry protective equipment and fire extinguisher. Handle the packaging and bags carefully so that they do not break. Make sure there are no leaks in the container, and load it so that it does not fall, fall, or be damaged, and ensure that the cargo is not collapsed.

14.7 Transport in bulk according to IMO instruments

: Not available.

SECTION 15 : Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

• Annex XIV : None of the components are listed.

• Substances of very high concern : None of the components are listed.

• Annex XVII

-Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Other EU regulations

• Industrial emissions

(integrated pollution prevention and control) -Air

: Not listed

• Industrial emissions

(integrated pollution prevention and control) –Water

: Not listed

• Ozone depleting substances (1005/2009/EU)

: Not listed

• Prior Informed Consent (PIC) (649/2012/EU)

: Not listed

• Seveso Directive

: This product is not controlled under the Seveso Directive.

National regulations

• Inventory list

EU - REACH

: Please contact your supplier for information on the inventory status of this material.

15.2 Chemical safety assessment

: This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16 : Other informationAbbreviations and acronyms

: ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 SGG = Segregation Group
 vPvB = Very Persistent and Very Bioaccumulative

Full text of abbreviated H statements

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Skin Sens. 1	SKIN SENSITISATION - Category 1

References

: DataLink TM
 REACH (Regulation (EC) 1907/2006) - Article 119(1). ECHA registered substances
 Registry of Toxic Effects of Chemical Substances (RTECS)
 U.S. Environmental Protection Agency, AQUIRE (Aquatic toxicity Information Retrieval) ECOTOX Database System
 Regulation 1272/2008 Annex VI - Table 3.2 - List of Classification and Labeling of Hazardous Substances

Notice to reader

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

Other information

: Not available.