Safety Data Sheet

According to Regulation (EC) No 1907/2006, Annex II,

Amended by COMMISSION REGULATION (EU) 2020/878,

Amended by COMMISSION DELEGATED REGULATION (EU) 2023/707,

According to REGULATION (EC) No 1272/2008

1,2-DIMETHOXYETHANE

Version 1.0

Issue date: 01-01-2025

Revision date: 01-01-2025 **CIRS SDS Record Number: CSSS-TCO-010-157191**

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name:	1,2-DIMETHOXYETHANE
Additional identification:	Nanoform is NOT covered by this SDS.
Identification of the product:	CAS#110-71-4 EC#203-794-9
Index Number:	603-031-00-3
REACH registration No.:	Not available

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

1.2.1 Identified uses:

Not available

1.2.2 Uses advised against:

No uses advised against are identified.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative):	-
Supplier(Manufacturer):	Anhui Lixing Chemical Co., Ltd
Address:	No.10, Zhongwang Road, Jixi County, Anhui Province, China
Contact person(E-mail):	gdq@lixingchem.com
Telephone:	+86-563-8152626
Fax:	+86-563-8167310

1.4 Emergency telephone Number:

+86 563 8159272 Only available during office hours (9:00a.m.-17:30p.m.)

Available outside office hours?	YES		NO	X

Section 2 Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification of the substance:

The substance is classified as following according to REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Flam. Liq. 2	H225
Acute Tox. 4	H332
Repr. 1B	H360FD

For full text of H- phrases: see section 2.2.

2.2 Label elements:

Hazard pictogram(s):

Signal word: Danger

Hazard statement(s):

H225: Highly flammable liquid and vapour.
H332: Harmful if inhaled.
H360FD: May damage fertility. May damage the unborn child.

Precautionary statement(s):

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof [electrical/ventilating/lighting] equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P312: Call a POISON CENTER/doctor if you feel unwell.
P370 + P378: In case of fire: Use water spray, dry chemical, alcohol foam, or carbon dioxide to extinguish.
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental Hazard information (EU) EUH019: May form explosive peroxides

2.3 Other hazards:

The substance is not PBT / vPvB.

The substance is not identified as having endocrine disrupting properties.

Section 3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration	Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)
Ethylene Glycol Dimethyl Ether	N/A	110-71-4	203-794-9	⩾99.5%	N/A

Section 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

4.1.2 In case of skin contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

4.1.3 In case of eyes contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.

4.1.4 In case of ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed:

Harmful if inhaled. May damage fertility. May damage the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:	Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.
Unsuitable extinguishing media:	Not available.

5.2 Special hazards arising from the substance or mixture

Above the flash point, explosive vapor-air mixtures may be formed. Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

5.3 Advice for firefighters:

Self-contained breathing apparatus with full-face mask and full protective clothing (standard wear).

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:	Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Use non-sparking tools and equipment.
6.1.2 For emergency responders:	Wear an appropriate NIOSH/MSHA approved respirator if vapour is generated.

6.2 Environmental precautions:

Try to prevent the material from entering drains or water courses. Advice Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

6.3 Methods and material for containment and cleaning up:

Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

6.4 Reference to other sections:

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. Avoid contact with eyes. Keep ignition sources away - Do not smoke. Protect against electrostatic charges.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities: Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Be aware of possible peroxide formation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

7.3 Specific end use(s): Not applicable.

Section 8 Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

			Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period		
Country	Substance	CAS No.	ppm	mg/m^3	ppm	mg/m^3	Notes
Latvia	Ethylene Glycol Dimethyl Ether	110-71-4	-	10	-	-	-

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values:

Workers - Hazard via inhalation route	Systemic effects-Long term exposure	DNEL=1.88 mg/m³
Workers - Hazard via dermal route	Systemic effects-Long term exposure	DNEL=0.27 mg/kg bw/day
General Population - Hazard via inhalation route	Systemic effects-Long term exposure	DNEL=0.33 mg/m³
General Population - Hazard via dermal route	Systemic effects-Long term exposure	DNEL=0.09 mg/kg bw/day
General Population - Hazard via oral route	Systemic effects-Long term exposure	DNEL=0.1 mg/kg bw/day
Hazard for aquatic organisms	Freshwater	PNEC=6.4 mg/L
Hazard for aquatic organisms	Marine water	PNEC=0.64 mg/L
Hazard for aquatic organisms	STP	PNEC=20 mg/L
Hazard for aquatic organisms	Sediment (freshwater)	PNEC=25.7 mg/kg sediment dw
Hazard for aquatic organisms	Sediment (marine water)	PNEC=2.57 mg/kg sediment dw
Hazard for terrestrial organisms	Soil	PNEC=1.39 mg/kg soil dw
Hazard for predators	Secondary poisoning	PNEC=0.622 mg/kg food

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Skin protection

Hand protection: Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived

	from it.
Body protection:	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory protection:	For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
Thermal hazards:	Wear suitable protective clothing to prevent heat.
8.2.3 Environmental exposure controls:	Avoid discharge into the environment. According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state:	Liquid
Colour:	Clear, colorless
Odour:	Sharp, ethereal odor
Odour threshold:	Not available
pH:	Not available
Melting point/freezing point (°C):	-58 °C
Boiling point or initial boiling point and boiling range (°C):	82 - 83 °C
Flash point (°C):	-2 °C
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (gas, liquid, solid):	Highly flammable liquid and vapour.
Ignition temperature (°C):	Not available
Lower and upper explosion limit:	ca. 1.6 % / 10.4 %
Vapour pressure (20°C):	66 hPa
Relative vapour density:	3.1 (Air=1)
Relative Density (g/cm^3):	0.87 g/cm³ (20 °C)
Bulk density (kg/m^3):	Not available
Solubility in water (g/l, 20°C):	1000 g/L (25 °C)
Solubility in other polar and non-polar solvents (g/l, 20°C):	soluble in chloroform, ether, acetone and benzene
Partition coefficient n-octanol/water (log Po/w, 20°C):	-0.21 (25 °C)
Auto-ignition temperature:	205 °C
Decomposition temperature:	Not available
Kinematic viscosity (mm²/s):	0.483 mm²/s (20°C)
Particle characteristics:	Not applicable
Explosive properties:	Non explosive
Oxidising properties:	No oxidizing properties
Molecular Formula:	C4H10O2
Molecular Weight:	90.12

9.2. Other information:

Fat solubility(solvent-oil to be specified) etc:	Not available
Surface tension:	70.7 mN/m (23 °C)
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
% Volatiles by volume(21°C):	100

Section 10 Stability and Reactivity

10.1 Reactivity:	The substance is stable under normal storage and handling conditions.
10.2 Chemical stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	No dangerous reactions known.
10.4 Conditions to avoid:	Heat, flame, ignition sources, air, incompatibles.
10.5 Incompatible materials:	Strong oxidizing agents.
10.6 Hazardous decomposition products:	Carbon dioxide and carbon monoxide may form when heated to decomposition.

Section 11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity:	
LD50(Oral, Rat):	5370 mg/kg bw female
LD50(Dermal, Rat):	> 5000 mg/kg bw female
LC50(Inhalation, Rat):	Not available
Skin corrosion/irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	May damage fertility. May damage the unborn child.
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

11.2 Information on other hazards

Endocrine disrupting properties	The substance is not identified as having endocrine disrupting properties.
Other information	Not applicable

Section 12 Ecological information

12.1 Toxicity:

Acute (short-term) toxicity:	
LC50(96h, Fish):	> 5000 mg/L
EC50(48h, Crustacea):	4000 mg/L
EC50(72h, Algae/aquatic plants):	9120 mg/L
Chronic (long-term) toxicity:	
NOEC(Fish):	Not available
NOEC(Crustacea):	320 mg/L
EC50(Algae/aquatic plants):	Not available
12.2 Persistence and degradability:	Not inherently and not primary biodegradable.

12.3 Bioaccumulative potential: Not available.

12.4 Mobility in soil: Koc: 4.244 L/kg

12.5 Results of PBT and vPvB assessment: The substance is not PBT / vPvB.

12.6 Endocrine disrupting properties: The substance is not identified as having endocrine disrupting properties.

12.7 Other adverse effects: Not available.

12.8 Additional information Not available.

Section 13 Disposal considerations

13.1 Waste treatment methods: Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

Section 14 Transport Information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
14. 1 UN number or ID number	UN2252	UN2252	UN2252	UN2252
14.2 UN proper shipping name	1,2-DIMETHOXYETHANE	1,2-DIMETHOXYETHANE	1,2-DIMETHOXYETHANE	1,2-DIMETHOXYETHANE
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No	No	No	No
14.6 Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
14.7 Maritime transport in bulk according to IMO instruments	IBC02	IBC02	IBC02	IBC02

Section 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

15.2 Chemical Safety Assessment YES [ ] NO [X]

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by (EU) 2020/878, (EU) 2023/707

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: Code international maritime dangerous goods code

ICAO: International Civil Aviation Organization

IATA: International Air Transport Association

LC50: median lethal concentration

EC50: The effective concentration of substance that causes 50% of the maximum response.

NOEC: No Observed Effect Concentration

DNEL: derived no-effect level

PNEC: predicted no-effect concentration

16.3 Key literature references and sources for data

ECHA Registered substances data

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008		Classification procedure
Flam. Liq. 2	H225	On basis of test data
Acute Tox. 4	H332	On basis of test data
Repr. 1B	H360FD	On basis of test data

16.5 Relevant H-statements (number and full text):

H225: Highly flammable liquid and vapour.

H332: Harmful if inhaled.

H360FD: May damage fertility. May damage the unborn child.

16.6 Training instructions:

Not applicable.

16.7 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.8 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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