

Safety Data Sheet

According to Regulation (EC) No 1907/2006, Annex II,
Amended by COMMISSION REGULATION (EU) 2020/878,
According to REGULATION (EC) No 1272/2008

3,4-Epoxy cyclohexylmethyl 3,4-epoxy cyclohexanecarboxylate

Version 1.0

Issue date: 29-01-2021

Revision date: 29-01-2021

CIRS SDS Record Number: CSSS-TCO-010-143513

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

1.1 Product identifier:

Identification on the label/Trade name: 3,4-Epoxy cyclohexylmethyl 3,4-epoxy cyclohexanecarboxylate
Additional identification: Nanoform is NOT covered by this SDS.
Identification of the product: CAS#2386-87-0 EC#219-207-4
Index Number: Not available
REACH registration No.: 01-2119846133-44-xxxx

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

1.2.1 Identified uses:

Light curing ink, light curing coating resin
PC 1: Adhesives, sealants
PC 9a: Coatings and paints, thinners, paint removes
PC 14: Metal surface treatment products
PC 15: Non-metal-surface treatment products
PC 19: Intermediate
PC 32: Polymer preparations and compounds
SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)
SU 9: Manufacture of fine chemicals
SU 16: Manufacture of computer, electronic and optical products, electrical equipment

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): Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer): Nantong Synasia New Material Co.,Ltd.
Address: No.59 Xingang Road, Rugao City, Jiangsu Province, China
Contact person(E-mail): ida@synasia.com.cn
Telephone: +86-21-64184919
Fax: +86-21-64047779

1.4 Emergency telephone Number:

+353 (1) 477 3710 Only available during office hours (9:00a.m.-17:30p.m.)

Available outside office hours? YES NO

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
Skin Sens. 1B	H317

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

2.2 Label elements:

Hazard pictogram(s):



Signal word:

Warning

Hazard statement(s):

H317: May cause an allergic skin reaction.

Precautionary statement(s):

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352: IF ON SKIN: Wash with plenty of water.
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental Hazard information (EU)

Not applicable.

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)
3,4-Epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate	01-2119846133-44-xxxx	2386-87-0	219-207-4	97%	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:

If inhaled, 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:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

4.1.3 In case of eyes contact:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

4.1.4 In case of ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

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

Ingestion: Slightly hazardous in case of ingestion

Skin contact: Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Eye Contact: Slightly hazardous in case of eye contact (irritant).

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: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: Not available

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released: Carbon dioxide (CO₂). Carbon monoxide (CO).

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: Eliminate all sources of ignition. Wear appropriate protective clothing. Avoid breathing vapours. Keep unnecessary people away; isolate hazard area and deny entry. Consider need for evacuation. Stay up wind and keep out of low areas where vapour may accumulate and ignite.

6.1.2 For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if vapour is generated.

6.2 Environmental Precautions:

Do not discharge into drains or watercourses or onto the ground.

6.3 Methods and material for Containment and Cleaning up:

Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

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:

Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapour/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away

from incompatibles such as acids, alkalis.

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:

Keep container tightly closed. Keep container in a cool, well-ventilated area.

7.3 Specific end use(s):

Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits: Not available.

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=0.18 mg/m ³
Workers - Hazard via inhalation route	Local effects-Long term exposure	DNEL=0.18 mg/m ³
Workers - Hazard via dermal route	Systemic effects-Long term exposure	DNEL=0.05 mg/kg bw/day
Hazard for aquatic organisms	Freshwater	PNEC= 0.024 mg/L
Hazard for aquatic organisms	Marine water	PNEC= 0.002 mg/L
Hazard for aquatic organisms	STP	PNEC= 19.5 mg/L
Hazard for aquatic organisms	Sediment (freshwater)	PNEC= 0.211 mg/kg sediment dw
Hazard for aquatic organisms	Sediment (marine water)	PNEC=0.021 mg/kg sediment dw
Hazard for terrestrial organisms	Soil	PNEC= 0.028 mg/kg soil dw

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: Safety glasses.

Skin protection

Hand protection: Gloves, Chemical resistant.

Body protection: Chemical resistant protective suit.

Respiratory protection: Approved/certified respirator with organic vapor cartridges.

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:

Appearance:	Liquid
Colour:	Colorless
Odour:	Odorless
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	Not available
Boiling point/range (°C):	Not available
Flash point (°C):	202 °C

Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not applicable
Ignition temperature (°C):	Not available
Upper/lower explosive limits:	Not available
Vapour pressure (25°C):	0.002 Pa
Vapour density:	Not available
Relative Density:	1.172(20.1 °C)
Bulk density (kg/m³):	Not available
Water solubility (g/l):	13 850 mg/L(20.2 °C)
n-Octanol/Water (log Po/w):	1.34 (20 °C)
Auto-ignition temperature:	375 °C
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	241(25°C)
Explosive properties:	Non-explosive
Oxidising properties:	Not-oxidising
Molecular Formula:	C14H20O4
Molecular Weight:	252.31

9.2. Other information:

Fat solubility(solvent-oil to be specified)	Not available
etc:	
Surface tension:	61 mN/m (20 °C)
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available

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:	May polymerise.
10.4 Conditions to avoid:	Incompatible materials.
10.5 Incompatible materials:	Reactive with acids, alkalis.
10.6 Hazardous decomposition products:	Carbon dioxide (CO ₂). Carbon monoxide (CO).

Section 11 Toxicological information

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

Acute toxicity:	
LD50(Oral, Rat):	ca. 5000 mg/kg bw
LD50(Dermal, Rat):	> 2 000 mg/kg bw
LC50(Inhalation, Rat):	>5.19 mg/L, 4 h
Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	May cause an allergic skin reaction.

Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
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):	24 mg/L
EC50(48h, Crustacea):	40 mg/L
EC50(72h, Algae/aquatic plants):	> 110 mg/L

Chronic (long-term) toxicity:

NOEC(Fish):	Not available
NOEC(Crustacea):	Not available
NOEC(Algae/aquatic plants):	Not available

12.2 Persistence and degradability: Readily biodegradable, but failing 10-day window.

12.3 Bioaccumulative potential: Not available.

12.4 Mobility in soil: log Koc: 1.419

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	Inland waterways	Sea transport	Air transport
--	----------------	------------------	---------------	---------------

	(ADR/RID)	(ADN)	(IMDG)	(ICAO/IATA)
14.1 UN number or ID number	Not regulated	Not regulated	Not regulated	Not regulated
14.2 UN Proper shipping name	Not regulated	Not regulated	Not regulated	Not regulated
14.3 Transport hazard Class(es)	Not regulated	Not regulated	Not regulated	Not regulated
14.4 Packing group	Not regulated	Not regulated	Not regulated	Not regulated
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	Not regulated	Not regulated	Not regulated	Not regulated

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

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by (EU) 2020/878

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 RID: Regulation for rail International transportation of Dangerous goods
 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
Skin Sens. 1B	H317	On basis of test data

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

H317: May cause an allergic skin reaction.

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.

Author: Hangzhou REACH Technology Group Co., Ltd. Website:www.cirs-group.com Tel:0571-87206555 Email:info@cirs-group.com