



MSDS No.: S001T2401210037

Revision date: 2024-1-22

Applicant: Inner Mongolia Zhongyuan Jiutai Technology Co., Ltd.

Address: No. 125 Jiaye Avenue, Intersection of Puwei 4th Road and Pujing 4th Road, Putao Dun Area, Alxa Left Banner, Alxa League, Inner Mongolia Autonomous Region

Sample information:

Sample name: 2-[2-(4-Chlorophenyl)ethyl]-2-(1,1-dimethylethyl)oxirane; 2-(4-Chlorophenethyl)-2-tert-butyloxirane

Model: None

Sample composition / raw materials (provided by the client): see Part 3 “Composition / information on ingredients” in the main body of the report

Compilation period: 19 January 2024 to 22 January 2024

Service requested Preparation of a Material Safety Data Sheet (MSDS) based on the sample data provided by the client

Abstract As requested by the client, the content and format of this Material Safety Data Sheet are prepared in accordance with the 10th revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). For details, please refer to the attached main body of the report.

Issued:



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Material Safety Data Sheet (MSDS)

Prepared in accordance with the 10th revised edition of GHS

1.1 Product identifier

Product name: 2-[2-(4-Chlorophenyl)ethyl]-2-(1,1-dimethylethyl)oxirane; 2-(4-Chlorophenethyl)-2-tert-butyloxirane

Product model: None

Product description: Pale yellow liquid with a characteristic odour

1.2 Recommended uses and restrictions on use

Recommended use: No data available

Restrictions on use: No data available

1.3 Manufacturer or supplier information

Manufacturer: Inner Mongolia Zhongyuan Jiutai Technology Co., Ltd.

Address: No. 125 Jiaye Avenue, Intersection of Puwei 4th Road and Pujing 4th Road, Putao Dun Area, Alxa Left Banner, Alxa League, Inner Mongolia Autonomous Region

Contact telephone: 15009650718

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1.4 Company emergency telephone 0483-2222103

Company emergency telephone: 15562020061

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

According to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), this product has no significant hazard to health or the environment and is not classified.

2.2 Label elements, including precautionary statements

Pictogram: No hazard pictogram

Signal word: No signal word

Hazard statement: No hazard statement

Precautionary statement: No precautionary statement

2.3 Other hazards not resulting in classification

No relevant information.

3. Composition / information on ingredients

Product description: Substance (); Mixture (); Article (✓)

Component name	CAS registry number	Weight percentage (%)
2-[2-(4-Chlorophenyl)ethyl]-2-(1,1-dimethylethyl)oxirane	80443-63-6	98.1%
Water content	7732-18-5	1%
Acetone-insoluble matter	—	0.5%
Impurities	—	0.4%

Abbreviation: CAS: Chemical Abstracts Service registry number

4. FIRST AID MEASURES

4.1 Description of first aid measures:

- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Skin contact: Remove/take off all contaminated clothing. Wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
- Inhalation: Move victim to fresh air, keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice/attention.
- Ingestion: If swallowed: Rinse mouth with water. If you feel unwell, consult a physician.

4.2 Most important symptoms and health effects: The main symptoms and effects are given in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed: Treat symptomatically. Carry out effective treatment according to the symptoms.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Use water, foam, carbon dioxide or sand to extinguish the fire.

Unsuitable extinguishing media: No information.

5.2 Special hazards arising from the substance or mixture:

Not a flammable or explosive hazardous material.

5.3 Protective equipment for firefighters:

Wear self-contained breathing apparatus and full protective equipment. Extinguish the fire from upwind. Do not inhale gas or smoke. Cool containers with water spray and promptly move unopened containers out of the fire area.

5.4 Further information:

Use water spray to cool unopened containers exposed to the fire. Prevent contaminated fire-fighting water from entering drains and watercourses.

6. ACCIDENTAL RELEASE MEASURES

For guidance on the selection of personal protective equipment, see Section 8 of this Safety Data Sheet. For disposal information, please refer to Section 13. Please comply with all applicable local and international regulations.

6.1 Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation, remove nearby ignition sources and evacuate personnel to a safe area.

6.2 Environmental precautions:
If it can be done safely, take measures to prevent further leakage or spillage and avoid release into the surrounding environment.

6.3 Methods and materials for containment and cleaning up:
Collect solid residues and place them in suitable containers; dispose of them in accordance with local regulations (see Section 13).

7. HANDLING AND STORAGE

7.1 Handling:
Eating, drinking and smoking are prohibited during handling. Prevent physical damage to containers. Keep away from ignition sources and heat.

7.2 Storage:
Conditions for safe storage:
Store in a cool, well-ventilated warehouse. Keep containers tightly closed and away from ignition sources and heat. The storage area should be equipped with spill emergency response equipment and suitable containment materials.
Incompatible materials: Strong acids, strong bases, strongly oxidizing substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Occupational exposure limits:
No data.

8.2 Exposure controls
Engineering controls: Provide local exhaust ventilation.
Personal protective equipment:
Respiratory protection: For normal contact, no special protective measures are required; select an appropriate filtering respirator according to the working environment.
Eye protection: For normal contact, no special protective measures are required; wear safety goggles when there is a risk of excessive exposure.
Body protection: For normal contact, no special protective measures are required; wear work clothing.
Hand protection: For normal contact, no special protective measures are required; wear protective safety gloves.
General protective and hygiene measures: Wash hands with soap and water after use and keep the workplace clean. Pay attention to personal hygiene. Operate in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Basic information	
Form	Liquid
Colour	Pale yellow
Odour	Characteristic odour
pH	No data

Melting point / melting range	No data
Boiling point / boiling range	No data
Flash point	No data
Flammability / explosive limits – lower limit, volume %	No data
Flammability / explosive limits – upper limit, volume %	No data
Relative density (water = 1)	No data
Vapour pressure	No data
Vapour density	No data
Solubility	No data
n-Octanol / water partition coefficient	No data
Auto-ignition temperature	No data
Decomposition temperature	No data
Odour threshold	No data
Evaporation rate	No data
Viscosity	No data
Flammability (solid, gas)	Not flammable.

10. STABILITY AND REACTIVITY

- 10.1 Stability: The product is stable under normal conditions of use and storage.
10.2 Hazardous reactions: No known hazardous reactions under normal use.
10.3 Conditions to avoid: High temperatures, heat sources, ignition sources.
10.4 Incompatible materials: Strong acids, strong bases, strong oxidizing agents.
10.5 Hazardous decomposition products: No data.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Not classified.
Skin corrosion / irritation:	Not classified.
Serious eye damage / irritation:	Not classified.
Respiratory sensitisation:	No known sensitising effect.
Skin sensitisation:	No known sensitising effect.
Carcinogenicity:	Not listed as a carcinogen or suspected carcinogen by the U.S. National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or the U.S. Occupational Safety and Health Administration (OSHA).
Germ cell mutagenicity:	Not classified.
Reproductive toxicity:	Not classified.
STOT – single exposure:	Not classified.
STOT – repeated exposure:	Not classified.

Aspiration hazard:	Not classified
Potential health effects:	None.
Routes of entry:	None.
Inhalation:	No obvious symptoms or effects under normal conditions.
Ingestion:	No obvious symptoms or effects under normal conditions.
Skin contact:	No obvious symptoms or effects under normal conditions.
Eye contact:	No obvious symptoms or effects under normal conditions.

12. ECOLOGICAL INFORMATION

- 12.1 Ecotoxicity: No data available.
- 12.2 Persistence and degradability: No data available.
- 12.3 Bioaccumulative potential: No data available.
- 12.4 Mobility in soil: No data available.
- 12.5 Results of PBT and vPvB assessment: No data available.
- 12.6 Other adverse environmental effects: No data available.

13. DISPOSAL CONSIDERATIONS

Disposal method:

Waste should be poured into a dedicated (covered) drum and treated centrally; discharge into drains is prohibited. The product and contaminated packaging must be disposed of as hazardous waste and sent to a licensed waste treatment company. Before disposing of large quantities, refer to the relevant national, regional and local environmental protection regulations.

Contaminated packaging:

Return to the supplier for recycling where possible. The facilities and sites used for disposal must comply with national occupational safety and health and environmental protection standards.

14. TRANSPORT INFORMATION

For sea transport handled under the classification of the IMO IMDG Code, the goods may be handled as non-restricted cargo.

- 14.1 UN number
ADR/RID/ADN, IMDG, IATA Not applicable

- 14.2 UN proper shipping name
ADR/RID/ADN, IMDG, IATA Not applicable

- 14.3 Transport hazard class(es)
ADR/RID/ADN, IMDG, IATA
Class Not applicable
Label Not applicable

14.4 Packing group	
ADR/RID/ADN, IMDG, IATA	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special precautions for users	Not applicable
14.7 MARPOL 73/78 (International Convention for the Prevention of Pollution from Ships) Annex II and bulk transport in accordance with the IBC Code (International Bulk Chemical Code)	No data available
14.8 Transport / additional information	Based on the above information, the product is not a dangerous good.
UN 'standard provisions	Not applicable

15. REGULATORY INFORMATION

Regulations / legislation specific for the substance or mixture with respect to safety, health and the environment
No data available.

Chemical safety assessment

No chemical safety assessment has been carried out for this product.

16. OTHER INFORMATION

16.1 References:

- [1] International Programme on Chemical Safety: International Chemical Safety Cards (ICSC)
Website: <http://www.ilo.org/dyn/icsc/showcard.home>
- [2] EU REACH Registered Substances Database
Website: <http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>
- [3] OECD Global Portal to Information on Chemical Substances
Website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- [4] U.S. CAMEO Chemicals Database
Website: <http://cameochemicals.noaa.gov/search/simple>
- [5] U.S. National Library of Medicine: Chemical Identification Database
Website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- [6] U.S. Environmental Protection Agency: Integrated Risk Information System
Website: <http://cfpub.epa.gov/iris/>
- [7] U.S. Department of Transportation: Emergency Response Guidebook
Website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- [8] German GESTIS Substance Database
Website: <http://gestis-en.itrust.de/>
- [9] International Agency for Research on Cancer (IARC) Website: <http://www.iarc.fr/>

16.2 Abbreviations:

PC-STEL	Permissible concentration – short-term exposure limit
PC-TWA	Time-weighted average
IARC	International Agency for Research on Cancer
LC50	50% lethal concentration
LD50	50% lethal dose
EC50	50% effective concentration
PBT	Persistent, bioaccumulative, toxic
vPvB	Very persistent and very bioaccumulative
IATA	International Air Transport Association
IMO	International Maritime Organization
IMDG	International Maritime Dangerous Goods Code
ICAO	International Civil Aviation Organization
UN	United Nations
NTP	U.S. National Toxicology Program
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	U.S. Occupational Safety and Health Administration
NIOSH	U.S. National Institute for Occupational Safety and Health

16.3 Disclaimer:

The format of this Safety Data Sheet complies with the preparation requirements of the 10th revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The data are derived from authoritative international databases and data submitted by the enterprise; other information is based on the knowledge currently held by the company. We endeavour to ensure the accuracy of all information contained herein; however, due to the diversity of information sources and the limitations of the company's knowledge, this document is provided for the user's reference only. Users of this Safety Data Sheet should judge the reasonableness of the relevant information according to the purpose of use. We assume no liability for any damage arising from the handling, storage, use or disposal of this product.

16.4 Revision information

MSDS preparation date	22 January 2024
MSDS revision date	
Reason for revision	
MSDS version	1.0