

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

### 1.1 Product identifier

Product name:	1,4-Butanediol diglycidyl ether
Synonyms:	1,4-Butane diglycidyl ether; 1,4-Bis(2,3-epoxypropoxy)butane; 1,4-Bis(glycidyloxy)butane
Cat. No.:	T2001-063
CAS No.:	2425-79-8
EC No.:	219-371-7

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

Identified uses:	Laboratory chemicals, manufacture of substances.
Uses advised against:	No uses advised against.

### 1.3 Details of the supplier of the SDS

Manufacturer:	Hefei TNJ Chemical Industry Co.,Ltd.
Address:	D1508 Xincheng Center, Qianshan Road, Zhengwu District,Hefei, Anhui 230022 China
E-mail:	sales@tnjchem.com
Telephone:	+ 86 551 65418684
Fax:	+ 86 551 65418697

### 1.4 Emergency telephone number

In China: + 86 551 65418684 (Monday to Friday, 8:30a.m. to 5:30p.m.,Beijing Time)

## Section 2: Hazards identification

### 2.1 Classification of the substance or mixture

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910. 1200)

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1

## 2.2 GHS Label elements, including precautionary statements

Hazard pictogram(s):



Signal word:

Danger

Hazard Statements:

### Hazard Statements

Causes skin irritation

May cause an allergic skin reaction

Causes serious eye damage

Harmful if swallowed, in contact with skin or if inhaled

### Precautionary Statements

#### Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Contaminated work clothing should not be allowed out of the workplace

#### Inhalation

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

Call a POISON CENTER or doctor/physician if you feel unwell

#### Skin

IF ON SKIN: Wash with plenty of soap and water

Call a POISON CENTER or doctor/physician if you feel unwell

Take off contaminated clothing and wash before reuse

If skin irritation or rash occurs: Get medical advice/attention

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

#### Disposal

Dispose of contents/container to an approved waste disposal plant

## 2.3 Other hazards

### Hazards not otherwise classified (HNOC)

Harmful to aquatic life with long lasting effects

## Section 3: Composition/information on ingredients

<b>3.1 Component information</b>			
Ingredients	CAS No.	EC No.	Content (%)
1,4-Butanediol diglycidyl ether	2425-79-8	219-371-7	<=100
<b>Section 4: First aid measures</b>			
<b>General Advice</b> If symptoms persist, call a physician.			
<b>Eye Contact</b> Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.			
<b>Skin Contact</b> Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.			
<b>Inhalation</b> Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.			
<b>Ingestion</b> Clean mouth with water and drink afterwards plenty of water.			
<b>Most important symptoms and effects</b> None reasonably foreseeable. Causes severe eye damage. May cause allergic skin reaction. 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: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting			
<b>Notes to Physician</b> Treat symptomatically			
<b>Section 5: Fire-fighting measures</b>			
<b>Suitable Extinguishing Media</b> Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.			
<b>Unsuitable Extinguishing Media</b> No information available			
<b>Flash Point</b> 112 °C / 233.6 °F			
<b>Method -</b> CC (closed cup)			
<b>Autoignition Temperature</b> No information available			
<b>Explosion Limits</b>			
<b>- Upper</b> No data available			
<b>- Lower</b> No data available			
<b>Sensitivity to Mechanical Impact</b> No information available			
<b>Sensitivity to Static Discharge</b> No information available			
<b>Specific Hazards Arising from the Chemical</b> Keep product and empty container away from heat and sources of ignition.			
<b>Hazardous Combustion Products</b> Carbon monoxide (CO). Carbon dioxide (CO2).			
<b>Protective Equipment and Precautions for Firefighters</b> As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.			
<b>NFPA</b>			
Health	Flammability	Instability	Physical hazards
2	0	1	N/A

## Section 6: Accidental release measures

### Personal Precautions

Ensure adequate ventilation. Use personal protective equipment as required.

### Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

### Methods for Containment and Clean Up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material.

## Section 7: Handling and storage

### Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

### Storage.

Store under an inert atmosphere. To maintain product quality: Keep refrigerated. Keep container tightly closed in a dry and well-ventilated place. Protect from moisture. Incompatible Materials. Acids. Bases.

## Section 8 : Exposure controls/personal protection

### 8.1 Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### 8.2 Exposure controls

#### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### 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 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

**Physical State** Liquid

**Appearance** Yellow

**Odor** Odorless

**Odor Threshold** No information available

**Ph** 7

**Melting Point/Range** No data available  
**Boiling Point/Range** 266 °C / 510.8 °F @ 760 mmHg  
**Flash Point** 112 °C / 233.6 °F  
**Method -** CC (closed cup)  
**Evaporation Rate** No information available  
**Flammability (solid,gas)** Not applicable  
**Flammability or explosive limits**  
- **Upper** No data available  
- **Lower** No data available  
**Vapor Pressure** 10 mmHg @ 20 °C  
**Vapor Density** 6.97  
**Specific Gravity** 1.100  
**Solubility** 55.6 g/L (20°C)  
**Partition coefficient; n-octanol/water** No data available  
**Autoignition Temperature** No information available  
**Decomposition Temperature** > 200°C  
**Viscosity** <15 mPa.s at 25 °C  
**Molecular Formula** C10 H18 O4  
**Molecular Weight** 202.25

## Section 10: Stability and reactivity

### Reactive Hazard

None known, based on information available

### Stability

Hygroscopic.

### Conditions to Avoid

Incompatible products. Exposure to moist air or water.

### Incompatible Materials

Acids, Bases

### Hazardous Decomposition Products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### Hazardous Polymerization

No information available.

### Hazardous Reactions

None under normal processing.

## Section 11: Toxicological information

### Acute Toxicity

#### Product Information

**Oral LD50** Category 4. ATE = 300 - 2000 mg/kg.

**Dermal LD50** Category 4. ATE = 1000 - 2000 mg/kg.

**Vapor LC50** Category 4. ATE = 10 - 20 mg/l.

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Oxirane, 2,2'-[1,4-butanediylbis(oxyethylene)]bis-	1134 mg/kg ( Rat ) 2000 mg/kg ( Rat )	LD50>2150mg/kg ( Rat )	Not listed

**Toxicologically Synergistic** No information available

#### Products

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

**Sensitization** No information available

**Irritation** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Oxirane, 2,2'-[1,4-butanediylbis(oxyethylene)]bis-	2425-79-8	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** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms/effects, both acute and delayed** 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: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## Section 12: Ecological information

### Eotoxicity

Do not empty into drains. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Oxirane, 2,2'-[1,4-butanediylbis(oxyethylene)]bis-	Not listed	24 mg/L 96h	Not listed	75 mg/L 24h

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Oxirane, 2,2'-[1,4-butanediylbis(oxymethylene)]bis-	- 1.33

## Section 13: Disposal considerations

### Waste Disposal 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

### DOT

Not regulated

### TDG

Not regulated

### IATA

Not regulated

### IMDG/IMO

Not regulated

## Section 15: Regulatory information

### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active- Inactive	TSCA-EPA Regulatory Flags
Oxirane, 2,2'-[1,4-butanediylbis(oxymethyle ne)]bis-	2425-79-8	X	ACTIVE	TP

### Legend:

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TP - Indicates a substance that is the subject of a proposed TSCA Section 4 test rule

**TSCA 12(b)** - Notices of Export Not applicable

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Oxirane, 2,2'-[1,4-butanediylbis(oxymethyle ne)]bis-	2425-79-8	X	-	219-371-7	X	X	X	X	X	KE-03826

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

## U. S. Federal Regulations

**SARA 313** Not applicable

**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.

**U.S. State Right-to-Know Regulations** Not applicable

**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 does not contain any DHS chemicals.

## Other International Regulations

**Mexico - Grade** No information available

## **Authorisation/ Restrictions according to EU REACH**

Component	REACH (1907/2006) - Annex XIV -Substances Subject to Authorization	REACH (1907/2006) - Annex XVII -Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Oxirane, 2,2'-[1,4-butanediylbis(oxymethylene)]bis-	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

## **Safety, health and environmental regulations/ legislation specific for the substance or mixture**

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Oxirane, 2,2'-[1,4-butanediylbis(oxymethylene)]bis-	2425-79-8	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)



			Requirements		
Oxirane, 2,2'-[1,4-butanediylbis(oxymet hylene)]bis-	2425-79-8	Not applicable	Not applicable	Not applicable	Not applicable
Section 16: Other information					
None.					
Declare to reader					
<p>The information in this Safety Data Sheet (SDS) was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. According to REACH Article 31(5), the SDS shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market, unless the recipient Member State(s) concerned provide otherwise. It should also be noted that this SDS is applicable to the countries with English as an official language.</p>					