



# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane

### 1.2 Other means of identification

**Product number** -  
**Other names** 2-[[4-[2-[4-(oxiran-2-ylmethoxy)phenyl]propan-2-yl]phenoxy]methyl]oxirane; 2,2-Bis(4-hydroxyphenyl)propane Diglycidyl Ether; Bisphenol A diglycidyl ether

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yien Chemical Technology Co., Ltd  
**Address** Building 6, 28 Yingong Road, Fengxian District, Shanghai Chemical Industry Zone, Shanghai, 201400, China  
**Telephone** +86-400-133-2688

### 1.5 Emergency phone number

**Emergency phone number** +86-400-133-2688  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Skin irritation, Category 2  
Eye irritation, Category 2  
Skin sensitization, Category 1

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Warning  
**Hazard statement(s)** H315 Causes skin irritation  
H319 Causes serious eye irritation  
H317 May cause an allergic skin reaction  
**Precautionary statement(s)**  
**Prevention** P264 Wash ... thoroughly after handling.

<b>Response</b>	P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
<b>Storage</b>	P272 Contaminated work clothing should not be allowed out of the workplace.
	P302+P352 IF ON SKIN: Wash with plenty of water/...
<b>Disposal</b>	P321 Specific treatment (see ... on this label).
	P332+P317 If skin irritation occurs: Get medical help.
	P362+P364 Take off contaminated clothing and wash it before reuse.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P333+P317 If skin irritation or rash occurs: Get medical help.
	none
	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## 2.3 Other hazards which do not result in classification

no data available

# SECTION 3: Composition/information on ingredients

## 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	1675-54-3	216-823-5	100%

# SECTION 4: First-aid measures

## 4.1 Description of necessary first-aid measures

### If inhaled

Fresh air, rest. Refer for medical attention.

### Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

### Following ingestion

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

## 4.2 Most important symptoms/effects, acute and delayed

Contact with liquid irritates eyes. Prolonged or repeated contact with skin causes irritation and dermatitis. (USCG, 1999)

## 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Measures following skin contact should include thorough cleansing with soap and water, followed by a waterless hand cleanser when absolutely necessary. The use of solvents may promote epidermal penetration of materials that would otherwise not penetrate the skin. Epoxy resins

# SECTION 5: Fire-fighting measures

## 5.1 Suitable extinguishing media

Since solvent curing agents /of epoxy resins/ are flammable liquids, fire hydrants & control measures are required. ... Fire extinguishers should be located in area. Epoxy resins

## 5.2 Specific hazards arising from the chemical

This chemical is probably combustible. (NTP, 1992)

## 5.3 Special protective actions for fire-fighters

Use water spray, powder, foam, carbon dioxide.

---

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.

### 6.2 Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.

### 6.3 Methods and materials for containment and cleaning up

Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water. Personal protection: filter respirator for organic gases and vapors.

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### 7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants. Safety cans should be used for storing flammable solvents. Epoxy resins

---

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

MAK: skin absorption (H); sensitization of skin (SH); carcinogen category: 3A

#### Biological limit values

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use local exhaust or breathing protection.

#### Thermal hazards

no data available

---

## SECTION 9: Physical and chemical properties and safety characteristics

<b>Physical state</b>	Bisphenol a diglycidyl ether is an odorless yellowish brown liquid. Sinks in water. (USCG, 1999)
<b>Colour</b>	Sticky
<b>Odour</b>	Odorless
<b>Melting point/freezing point</b>	275°C(dec.)(lit.)
<b>Boiling point or initial boiling point and boiling range</b>	210°C/1mmHg(lit.)
<b>Flammability</b>	Combustible.
<b>Lower and upper explosion limit/flammability limit</b>	Combustible
<b>Flash point</b>	132°C(lit.)
<b>Auto-ignition temperature</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	less than 1 mg/mL at 67.1° F (NTP, 1992)
<b>Partition coefficient n-octanol/water</b>	log Kow = 3.84 (est)
<b>Vapour pressure</b>	3.66E-09mmHg at 25°C
<b>Density and/or relative density</b>	1.17 g/cm3
<b>Relative vapour density</b>	(air = 1): 11.7
<b>Particle characteristics</b>	no data available

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The substance can presumably form explosive peroxides. Reacts with strong oxidants.

### 10.2 Chemical stability

Volatility of uncured epoxy resins is not great.

### 10.3 Possibility of hazardous reactions

BISPHENOL A DIGLYCIDYL ETHER, is not highly reactive. Ethers can act as bases. They form salts with strong acids and addition complexes with Lewis acids. The complex between diethyl ether and boron trifluoride is an example. Ethers may react violently with strong oxidizing agents. In other reactions, which typically involve the breaking of the carbon-oxygen bond, ethers are relatively inert.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Reacts with strong oxidants.

### 10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

---

## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 11,300 uL/kg
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

Evaluation: No epidemiological data relevant to the carcinogenicity of bisphenol A diglycidyl ether were available. There is limited evidence in experimental animals for the carcinogenicity of bisphenol A diglycidyl ether. Overall evaluation: Bisphenol A diglycidyl ether is not classifiable as to its carcinogenicity to humans (Group 3).

**Reproductive toxicity**

no data available

**STOT-single exposure**

The substance is irritating to the eyes and skin. Exposure could cause lowering of consciousness.

**STOT-repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis. Repeated or prolonged contact may cause skin sensitization.

**Aspiration hazard**

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

---

## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

An estimated BCF of 180 was calculated for bisphenol A diglycidyl ether(SRC), using an estimated log Kow of 3.8(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is high(SRC), provided the compound is not metabolized by the organism(SRC).

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of bisphenol A diglycidyl ether can be estimated to be 1800(SRC). According to a classification scheme(2), this estimated Koc value suggests that bisphenol A diglycidyl ether is expected to have low mobility in soil(SRC).

### 12.5 Other adverse effects

no data available

---

## SECTION 13: Disposal considerations

### 13.1 Disposal methods

**Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.  
(For reference only, please check.) (For reference only, please check.) (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.  
(For reference only, please check.) (For reference only, please check.) (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.  
(For reference only, please check.) (For reference only, please check.) (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.  
(For reference only, please check.) (For reference only, please check.) (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No IMDG: No IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	1675-54-3	216-823-5
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

---

## SECTION 16: Other information

### Information on revision

**Creation Date** July 15, 2019  
**Revision Date** July 15, 2019

### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

Boiling point, solubility in water, vapour pressure, relative density of the vapour/air mixture, and auto-ignition temperature are unknown in the literature. Check for peroxides prior to distillation; eliminate if found.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

---

*Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*