

## Chemical Safety Data Sheet MSDS / SDS

**2,2-BIS[4-(2-HYDROXY-3-METHACRYLOXYPROPOXY)PHENYL]PROPANE**

Revision Date:2026-03-21 Revision Number:1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : 2,2-BIS[4-(2-HYDROXY-3-METHACRYLOXYPROPOXY)PHENYL]PROPANE  
CBnumber : CB2199669  
CAS : 1565-94-2  
EINECS Number : 216-367-7  
Synonyms : BIS-GMA;Bisphenol A bis(2-hydroxy-3-methacryloxypropyl) ether

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

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 soap and water.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continuerinsing.  
P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

**Hazard statements**

H317 May cause an allergic skin reaction  
H318 Causes serious eye damage

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: 2,2-BIS[4-(2-HYDROXY-3-METHACRYLOXYPROPOXY)PHENYL]PROPANE
Synonyms	: BIS-GMA; Bisphenol A bis(2-hydroxy-3-methacryloxypropyl) ether
CAS	: 1565-94-2
EC number	: 216-367-7
MF	: C29H36O8
MW	: 512.59

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## SECTION 4: First aid measures

### General advice

Show this safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### **Specific hazards during fire fighting**

Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

### **Hazardous combustion products**

Carbon oxides

### **Specific extinguishing methods**

Prevent fire extinguishing water from contaminating surface water or the ground water system.

### **Special protective equipment for fire-fighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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## **SECTION 6: Accidental release measures**

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

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### **Environmental precautions**

Do not let product enter drains.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

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## **SECTION 7: Handling and storage**

### **Handling**

#### **Avoidance of contact**

Strong oxidizing agents

### **Storage**

#### **Further information on storage conditions**

Tightly closed.

#### **Storage class**

10, Combustible liquids

#### **Recommended storage temperature**

2 - 8 °C

#### **Further information on storage stability**

Light sensitive.

#### **Packaging material**

Suitable material: Amber HR-HDPE Bottle/Jar

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## SECTION 8: Exposure controls/personal protection

### **Ingredients with workplace control parameters**

Biological occupational exposure limits

### **Engineering measures**

No data available

### **Personal protective equipment**

#### **Respiratory protection**

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### **Recommended Filter type**

Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Tightly fitting safety goggles

#### **Skin and body protection**

protective clothing

#### **Hand protection**

#### **Remarks**

required

#### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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## SECTION 9: Physical and chemical properties

### **Information on basic physicochemical properties**

liquid

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#### **Color**

No data available

#### **Odor**

No data available

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/ range**

No data available

**Boiling point/boiling range**

670.3±55.0 °C(Predicted)

**Flash point**

110 °C

**Evaporation rate**

No data available

**Flammability (solid, gas)**

No data available

**Flammability (liquids)**

No data available

**Burning rate**

No data available

**Upper explosion limit / Upper flammability limit**

No data available

**Lower explosion limit / Lower flammability limit**

No data available

**Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

1.161 g/mL at 25 °C(lit.)

**Density**

1.161 g/mL (25 °C)

Method: lit.

**Water solubility**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

Not classified as explosive.

**Oxidizing properties**

none

**Molecular weight**

512.59 g/mol

**Particle characteristics Particle size**

No data available

**Refractive index**

1.552

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## SECTION 10: Stability and reactivity

**Reactivity**

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**Possibility of hazardous reactions**

Violent reactions possible with: Strong oxidizing agents

## Conditions to avoid

Strong heating.

## Incompatible materials

Strong oxidizing agents

## Hazardous decomposition products

In the event of fire: see section 5

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# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute toxicity

Acute toxicity estimate Oral - > 5,000 mg/kg (Calculation method)

Inhalation: No data available

Dermal: No data available

### Skin corrosion/irritation

Classified based on available data. For more details, see section 2

### Serious eye damage/eye irritation

Remarks: No data available

### Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

### Germ cell mutagenicity

Classified based on available data. For more details, see section 2

### Carcinogenicity

Classified based on available data. For more details, see section 2

### Reproductive toxicity

Classified based on available data. For more details, see section 2

### Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

### Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

### Aspiration hazard

Classified based on available data. For more details, see section 2

## 11.2 Additional Information

RTECS: UD3438000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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# SECTION 12: Ecological information

## Ecotoxicity

### Components:

#### hydroquinone monomethyl ether:

##### Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): 28.5 mg/l Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 203

##### Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 3 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes NOEC (Daphnia magna (Water flea)): 0.68 mg/l Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes GLP: yes

##### Toxicity to algae/aquatic plants

EC50 (Pseudokirchneriella subcapitata (green algae)): 54.7 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes

## Ecotoxicology Assessment

### Chronic aquatic toxicity

Harmful to aquatic life with long lasting effects.

#### hydroquinone:

##### Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.638 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 203

##### Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.134 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes

##### Toxicity to algae/aquatic plants

ErC50 (Pseudokirchneriella subcapitata): 0.33 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes NOEC (Pseudokirchneriella subcapitata): 0.019 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes

##### Toxicity to fish (Chronic toxicity)

NOEC (Pimephales promelas (fathead minnow)):  $\geq 0.1$  mg/l End point: reproduction rate Exposure time: 32 d Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 210 GLP: yes

##### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

LC50 (Daphnia magna (Water flea)): 0.061 mg/l End point: mortality Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes

## Ecotoxicology Assessment

### Acute aquatic toxicity

Very toxic to aquatic life.

### Chronic aquatic toxicity

Very toxic to aquatic life with long lasting effects.

## Persistence and degradability

**Components:****hydroquinone monomethyl ether:****Biodegradability**

aerobic Inoculum: activated sludge Result: Readily biodegradable. Biodegradation: 86 % Exposure time: 28 d Method: OECD Test Guideline 301C

**hydroquinone:****Biodegradability**

aerobic Inoculum: activated sludge Concentration: 100 mg/l Result: Readily biodegradable. Biodegradation: 70 % Exposure time: 14 d Method: OECD Test Guideline 301C

**Bioaccumulative potential****Components:****hydroquinone monomethyl ether:****Bioaccumulation**

Remarks: Bioaccumulation is unlikely.

**hydroquinone:****Partition coefficient: octanol/water**

log Pow: 0.59 (20 - 25 °C) Remarks: Bioaccumulation is not expected.

**Mobility in soil****Components:****hydroquinone monomethyl ether:****Distribution among environmental compartments**

Adsorption/Soil Koc: 55.7 Remarks: (Lit.)

**Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

**Disposal methods****Waste from residues**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14: Transport information

## International Regulations

### IATA-DGR

Not regulated as a dangerous good

UN/ID No. : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Packing instruction (cargo aircraft) : Not applicable

Packing instruction (passenger aircraft) : Not applicable

### IMDG-Code

Not regulated as a dangerous good

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

Marine pollutant : no

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## National Regulations

### JT/T 617

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Environmentally hazardous : no

### Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15: Regulatory information

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals, but it meets the definition of

hazardous chemicals and its principles of determination.

## **National regulatory information**

### **Law on the Prevention and Control of Occupational Diseases**

### **Regulations on Safety Management of Hazardous Chemicals**

### **Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)**

Not listed

### **Hazardous Chemicals for Priority Management**

Not listed under SAWS

### **Catalogue of Specially Controlled Hazardous**

Not listed Chemicals

### **List of Explosive Precursors**

Not listed

### **Regulations on Labour Protection in Workplaces where Toxic Substances are Used**

### **Catalogue of Highly Toxic Chemicals**

Not listed

### **Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

### **China Severely Restricted Toxic Chemicals for Import and Export**

Not listed

### **Regulation on the Administration of Precursor Chemicals**

### **Catalogue and Classification of Precursor Chemicals**

Not listed

### **Regulations on the Administration of Controlled Chemicals**

### **List of Controlled Chemicals**

Not listed

### **Regulations of Ozone Depleting Substances Management**

### **List of Controlled Ozone Depleting Substances**

Not listed

### **List of Controlled Ozone Depleting Substances Import and Export**

Not listed

## **Environmental Protection Law**

### **List of Priority Controlled Chemicals**

Not listed

### **List of Key Controlled New Pollutants**

Not listed

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## **SECTION 16: Other information**

### **Full text of other abbreviations**

#### **ACGIH**

USA. ACGIH Threshold Limit Values (TLV)

#### **ACGIH BEI**

ACGIH - Biological Exposure Indices (BEI)

#### **GBZ 2.1-2007**

Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

#### **ACGIH / TWA**

8-hour, time-weighted average

#### **GBZ 2.1-2007 / PC-TWA**

Permissible concentration - time weighted average

**GBZ 2.1-2007 / PC-STEL AIC - Australian Invent Transport by Land of Bra bw - Body weight; CMR Standard of the German List (Canada); ECx - Conc associated with x% respo Chemical Substances (Jap response; ERG - Emerge GLP - Good Laboratory P cer; IATA - International Construction and Equipm Half maximal inhibitory c tion; IECSC - Inventory o tional Maritime Dangerou Industrial Safety and H Standardisation; KECl - K tration to 50 % of a test (Median Lethal Dose); MA lution from Ships; MERC of Dangerous Goods; n.o. - No Observed (Adverse) fect Level; NOELR - No Norm; NTP - National Toxi icals; OECD - Organisatio fice of Chemical Safety a and Toxic substance; PIC stances; (Q)SAR - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemical States); UN - United Nat Transport of Dangerous WHMIS - Workplace Hazar**

Permissible concentration - short term exposure limit ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)

ErCx - Concentration associated with x% growth rate cy Response Guide

GHS - Globally Harmonised System

actice

IARC - International Agency for Research on Cancer

IBC - International Code for the Intent of Ships carrying Dangerous Chemicals in Bulk

IC50 - Concentration

ICAO - International Civil Aviation Organization - Existing Chemical Substances in China

IMDG - International Maritime Dangerous Goods

IMO - International Maritime Organisation

ISHL - International Safety Law (Japan)

ISO - International Organisation for Standardisation - Existing Chemicals Inventory

LC50 - Lethal Concentration

LD50 - Lethal Dose to 50% of a test population

POL - International Convention for the Prevention of Pollution from Ships - The Agreement for the Facilitation of the Transport of Dangerous Goods - Not Otherwise Specified

NCh - Chilean Norm

NO(A)EC - No Observed (Adverse) Effect Concentration

NO(A)EL - No Observed (Adverse) Effect Loading Rate

NOM - Official Mexican Nomenclature Program

NZIoC - New Zealand Inventory of Chemicals for Economic Co-operation and Development

OPPTS - Office of Pollution Prevention and Control

PBT - Persistent, Bioaccumulative and Toxic - Philippines Inventory of Chemicals and Chemical Substances Structure Activity Relationship

REACH - Regulation of the European Parliament and of the Council concerning the Restriction of Chemicals

SADT - Self-Heating Temperature

SDS - Safety Data Sheet

TCSI - Taiwan Chemical Safety Inventory

TDG - Transportation of Dangerous Goods

TECIS - Toxic Chemicals Inventory System

TSCA - Toxic Substances Control Act (United States)

UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.