

## Chemical Safety Data Sheet MSDS / SDS

**BISPHENOL A DIGLYCIDYL ETHER RESIN**Revision Date:2024-03-16 Revision Number:1

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

Product name : BISPHENOL A DIGLYCIDYL ETHER RESIN  
CBnumber : CB3749115  
CAS : 1675-54-3  
EINECS Number : 216-823-5  
Synonyms : DGEBA,Bisphenol A diglycidyl ether resin

**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 : 400-158-6606

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

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

**Label elements****Pictogram(s)**

□

Signal word : Warning

**Hazard statement(s)**

H315 Causes skin irritation  
H317 May cause an allergic skin reaction  
H319 Causes serious eye irritation

**Precautionary statement(s)**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.

P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P321 Specific treatment (see ... on this label).

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+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P501 Dispose of contents/container to.....

#### **Prevention**

P264 Wash ... thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

#### **Response**

P302+P352 IF ON SKIN: Wash with plenty of water/...

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.

#### **Storage**

none

#### **Disposal**

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.

#### **Other hazards**

no data available

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name : BISPHENOL A DIGLYCIDYL ETHER RESIN

Synonyms : DGEBA,Bisphenol A diglycidyl ether resin

CAS : 1675-54-3

EC number : 216-823-5

MF : C<sub>21</sub>H<sub>24</sub>O<sub>4</sub>

MW : 340.41

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## SECTION 4: First aid measures

## Description of 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 .

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

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

## Indication of any immediate medical attention and special treatment needed

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

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## SECTION 5: Firefighting measures

### 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

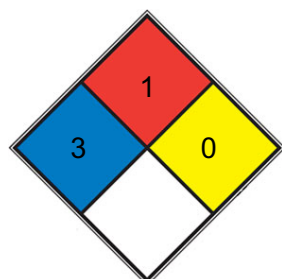
### Specific Hazards Arising from the Chemical

This chemical is probably combustible. (NTP, 1992)

### Advice for firefighters

Use water spray, powder, foam, carbon dioxide.

### NFPA 704



■ HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

■ FIRE 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### 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.

### 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.

### 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.

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## SECTION 7: Handling and storage

### 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.

### Conditions for safe storage, including any incompatibilities

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

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

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

#### Biological limit values

no data available

### Exposure controls

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

### Individual protection measures

#### 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

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	viscous liquid
Colour	White
Odour	Odorless
Melting point/freezing point	275°C(dec.)(lit.)
Boiling point or initial boiling point and boiling range	210°C/1mmHg(lit.)
Flammability	Combustible.
Lower and upper explosion limit/flammability limit	Combustible
Flash point	132°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Soluble in DMSO (up to 30 mg/ml) or in Ethanol (up to 15 mg/ml)
Partition coefficient n-octanol/water	log Kow = 3.84 (est)
Vapour pressure	3.66E-09mmHg at 25°C
Density and/or relative density	1.17 g/cm <sup>3</sup>
Relative vapour density	(air = 1): 11.7
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

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

### Chemical stability

Volatility of uncured epoxy resins is not great.

### 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.

### **Conditions to avoid**

no data available

### **Incompatible materials**

Reacts with strong oxidants.

### **Hazardous decomposition products**

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

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## **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.

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## SECTION 12: Ecological information

### 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

### Persistence and degradability

no data available

### 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).

### 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).

### Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 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.

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## SECTION 14: Transport information

### UN Number

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

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **UN Proper Shipping Name**

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

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Transport hazard class(es)**

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

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Packing group, if applicable**

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

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

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## SECTION 15: Regulatory information

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

#### **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.

#### **PICCS**



Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.

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## SECTION 16: Other information

### **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.

#### **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.