Qingdao YLSCH Industry&Trade Co.,Ltd.
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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

1.1GHS Product identifier

Product name	Decabromodiphenyl oxide/DBDPO

1.2Other means of identification

Product number	-
Other names	Bis(pentabromophenyl) ether

1.3Recommended use of the chemical and restrictions on use

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

1.4Supplier's details

Company	Qingdao YLSCH Industry&Trade Co.,Ltd.
Address	Room 501,2-3 Unit No.8,zhengzhou Road,Qingdao,China.
Telephone	86-532-82678303

1.5Emergency phone number

Emergency phone number	86 18661665800
Service hours	Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1Classification of the substance or mixture

Not classified.

2.2GHS label elements, including precautionary statements

Pictogram(s)	No symbol.
Signal word	No signal word
Hazard statement(s)	none
Precautionary statement(s)	
Prevention	none
Response	none

Storage	none
Disposal	none

2.3Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Decabromodiphenyl oxide	Bis(pentabromophenyl) ether	1163-19-5	214-604-9	100%

SECTION 4: First-aid measures

4.1Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Rinse and then wash skin with water and soap.

Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible).

Following ingestion

Rinse mouth. Give one or two glasses of water to drink.

4.2Most important symptoms/effects, acute and delayed

SYMPTOMS: Symptoms of exposure to this compound may include irritation of the skin, eyes, mucous membranes and upper respiratory tract. It may also cause diarrhea, liver damage and kidney damage. Chronic exposure may cause intoxication. ACUTE/CHRONIC HAZARDS: This compound is an irritant of the skin, eyes, mucous membranes and upper respiratory tract. It may be harmful by inhalation, ingestion and skin absorption. When heated to decomposition it emits toxic fumes of carbon monoxide and carbon dioxide. It may also emit fumes of hydrogen bromide. (NTP, 1992)

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

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

SECTION 5: Fire-fighting measures

5.1Suitable extinguishing media

Wear self contained breathing apparatus for fire fighting if necessary.

5.2Specific hazards arising from the chemical

Flash point data for this chemical are not available; however, it is probably combustible. (NTP, 1992)

5.3Special protective actions for fire-fighters

In case of fire in the surroundings, use appropriate extinguishing media.

SECTION 6: Accidental release measures

6.1Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

6.2Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

6.3Methods and materials for containment and cleaning up

ACCIDENTAL RELEASE MEASURES: Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Avoid breathing dust.; Environmental precautions: Do not let product enter drains.; Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1Precautions for safe handling

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.

7.2Conditions for safe storage, including any incompatibilities

Separated from food and feedstuffs.Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

SECTION 8: Exposure controls/personal protection

8.1Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2Appropriate engineering controls

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

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

Eye/face protection

Wear safety spectacles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Solid. Powder.
Colour	Whitish.
Odour	Odorless
Melting point/freezing point	304 °C. Remarks:Measurement performed at sea level and room temperature.
Boiling point or initial boiling point and boiling range	256°C(lit.)
Flammability	Not combustible.
Lower and upper explosion limit/flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	less than 1 mg/mL at 68° F (NTP, 1992)
Partition coefficient n-octanol/water	log Pow = 6.625. Temperature:25 °C.
Vapour pressure	0 Pa. Temperature:21 °C.
Density and/or relative density	2.63. Temperature:20 °C.
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1Reactivity

On combustion, forms toxic fumes.

10.2Chemical stability

Stable under recommended storage conditions.

10.3Possibility of hazardous reactions

DECABROMODIPHENYL OXIDE is incompatible with strong oxidizers (NTP, 1992).

10.4Conditions to avoid

no data available

10.5Incompatible materials

Strong oxidizing agents

10.6Hazardous decomposition products

When heated to decomposition it emits toxic fumes of /hydrogen bromide/.

SECTION 11: Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: LC50 - rat (male/female) - > 48.2 mg/L air (nominal).
- 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 decabromodiphenyl oxide. There is limited evidence in experimental animals for the carcinogenicity of decabromodiphenyl oxide. Overall evaluation: Decabromodiphenyl oxide is not classifiable as to its carcinogenicity to humans (Group 3).

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

The substance may have effects on the thyroid.

Aspiration hazard

A nuisance-causing concentration of airborne particles can be reached quickly.

SECTION 12: Ecological information

12.1Toxicity

- Toxicity to fish: LC50 - Oryzias latipes - > 500 mg/L - 48 wk.
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: EC50 - S. costatum (72 hr), T. pseudonana (72 hr) , Chlorella sp (96 hr). - > 1 mg/L - 72 h.
- Toxicity to microorganisms: EC50 - activated sludge of a predominantly domestic sewage - > 15 mg/L - 3 h. Remarks:Respiration rate.

12.2Persistence and degradability

AEROBIC: Decabromodiphenyl ether was judged to be moderate to hard to degrade according to results obtained by the "cultivation method" in which 27% and 4% degradation occurred in 3 days in river water and coastal sea water inoculum, respectively, in Japan(1). Decabromodiphenyl ether, present at 100 mg/L, reached 0% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test which classified the compound as not readily biodegradable(2). A soil degradation study found that soils spiked with 1, 10, and 100 mg/kg decabromodiphenyl ether showed no degradation after 160 days of incubation(3).

12.3Bioaccumulative potential

BCF values of <5 to <50 were measured in fish for decabromodiphenyl ether(SRC) using carp (Cyprinus carpio) which were exposed over a 6-week period(1). Forty-eight hour fish (species not reported) bioconcentration studies with C14-labeled decabromodiphenyl ether revealed no measurable bioconcentration in fish filets; the measured BCF was 0.3(2). Rainbow trout (Onchorhynchus mykiss) exposed to decabromobiphenyl ether during a 120-day study contained this compound at 38 ng/g of fresh weight in muscle tissue and up to 870 ng/g of fresh weight in the liver(3). An uptake of approximately 0.005% was calculated from decabromodiphenyl ether concentrations in muscle tissue and the mean dietary dose of decabromodiphenyl ether; this value does not include the sum of the metabolites of this compound(3). Using juvenile lake trout (Salvelinus namaycush) and a 56-day period, decabromodiphenyl ether had a BCF of <1(4). According to a classification scheme(5), these BCF values suggest the potential for bioconcentration in aquatic organisms is low. Wild blue mussels (Mytilus edulis) collected on the Dutch coast were put through depuration for 24 hours; decabromodiphenyl ether concentrations dropped from 3350 to 50 ng/g of extractable lipids in one test and from 1580 to 480 ng/g of extractable lipids in another(6). Plankton, Diporeia, lake whitefish, lake trout, and Chinook salmon were collected from Lake Michigan in 2006 between April and August to study the bioaccumulation and biomagnification of polybrominated diphenyl ethers in a food web of Lake Michigan(7); decabromodiphenyl ether did not biomagnify in the food web(7). A microcosm study using carp (Cyprinus carpio) found no bioaccumulation of decabromodiphenyl ether after 20 and 50-day exposure periods(8).

12.4Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of decabromodiphenyl ether can be estimated to be 2.8X10+5(SRC). According to a classification scheme(2), this estimated Koc value suggests that decabromodiphenyl ether is expected to be immobile in soil.

12.5Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1Disposal 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

14.1UN 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.)

14.2UN 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.)

14.3Transport 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.)

14.4Packing 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.)

14.5Environmental hazards

ADR/RID: No	IMDG: No	IATA: No

14.6Special precautions for user

no data available

14.7Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
Decabromodiphenyl oxide	Bis(pentabromophenyl) ether	1163-19-5	214-604-9
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
- 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

The substance has a variable melting and boiling range, reflecting the nature of the material and the individual manufacturing processes.

Any questions regarding this SDS, Please send your inquiry to sales@ylsch-rbb.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.