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	Diethyl phthalate

1.2 Other means of identification

Product number	-
Other names	1,2-Benzenedicarboxylic acid, diethyl ester; phthalic acid di-n-ethyl ester; unimollda

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 Yansheng Internet Technology Co., Ltd
Address	513, A3 / F, green space future center, Fengxian District, Shanghai, 201400, China
Telephone	+86-4000-6969-66

1.5 Emergency phone number

Emergency phone number	+86-4000-6969-66
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

Not classified.

2.2 GHS 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

2.3 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
Diethyl phthalate	Diethyl phthalate	84-66-2	201-550-6	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

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

Symptoms unlikely from any form of exposure. (USCG, 1999)

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

Inhalation: remove to fresh air. Eyes: flush with water. Skin: flush with water, wash well with soap and water.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

To fight fire, use water spray, mist, foam.

5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Irritating vapors of unburned chemical may form in fire. (USCG, 1999)

5.3 Special protective actions for fire-fighters

Use alcohol-resistant foam, powder, carbon dioxide.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.3 Methods and materials for containment and cleaning up

Environmental considerations-land spill: Dig a pit, pond, lagoon, holding area to contain liquid or solid material. Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete. Absorb bulk liquid with fly ash, cement powder, or commercial sorbents. SRP: If time permits, pits, ponds, lagoons, soak holes, or holding areas should be sealed with an impermeable flexible membrane liner.

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

Storage temp: ambient; venting: open.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

TLV: 5 mg/m3, as TWA; A4 (not classifiable as a human carcinogen)

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 spectacles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation. Use local exhaust.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid. Oily.
Colour	Colourless.
Odour	Practically odorless
Melting point/freezing point	-40.5 °C. Atm. press.:101.3 kPa.
Boiling point or initial boiling point and boiling range	295 °C. Atm. press.:101.3 kPa.
Flammability	Class IIIB Combustible Liquid: Fl.P. at or above 200°F.; however, ignition is difficult.
Lower and upper explosion limit/flammability limit	Lower flammable limit: 0.7% by volume at 368 deg F (186 deg C)

Flash point	162.7 °C. Atm. press.:101.3 kPa.
Auto-ignition temperature	457 °C. Atm. press.:1 013 hPa.
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	31.3 centistokes at 0 deg C
Solubility	less than 1 mg/mL at 66° F (NTP, 1992)
Partition coefficient n-octanol/water	log Pow = 2.47. Remarks:No data on temp and pH.
Vapour pressure	0 mm Hg. Temperature:25 °C.
Density and/or relative density	1.12 g/cm³. Temperature:25 °C.
Relative vapour density	7.66 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Decomposes on heating and on burning. This produces toxic fumes and gases (phthalic anhydride - see ICSC 0315). Attacks some plastics.

10.2 Chemical stability

Stable to light

10.3 Possibility of hazardous reactions

CombustibleDIETHYL PHTHALATE is an ester. Esters react with acids to liberate heat along with alcohols and acids. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Heat is also generated by the interaction of esters with caustic solutions. Flammable hydrogen is generated by mixing esters with alkali metals and hydrides. Can generate electrostatic charges. [Handling Chemicals Safely 1980. p. 250].

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

May attack some forms of plastics.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 - rat - 8.2 mL/kg bw.
- Inhalation: LC50 Rat inhalation >4.64 mg/L for 6 hr
- 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

Cancer Classification: Group D Not Classifiable as to Human Carcinogenicity

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish: LC50; Species: Lepomis macrochirus (Bluegill, young of year, weight 0.32-1.2 g); Conditions: freshwater, static, 21-23 deg C, pH 6.5-7.9, hardness 32-48 mg/L CaCO3, alkalinity 28-34 mg/L CaCO3, conductivity 93-190 umhos/cm, dissolved oxygen 0.3-9.7 mg/L; Concentration: 120000 ug/L for 24 hr /> or = 80% purity
- Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna - 52 mg/L - 24 h.
- Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 85.6 mg/L - 96 h.
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: The aerobic half-life of diethyl phthalate in natural fresh water was estimated as 3 days(1). Diethyl phthalate was found to degrade to ethyl methyl phthalate, dimethyl phthalate, methyl phthalate and ethyl phthalate when co-contaminated with methanol(2). A shake flask experiment using microorganisms isolated from a municipal sludge resulted in complete aerobic degradation of 400 mg/L of diethyl phthalate in approximately 35 hours, 200 mg/L in 25 hours, 140 mg/L in 22 hours and 75 mg/L in 18 hours(3). Diethyl phthalate was completely degraded by Rhine River water at 20 deg C in a 3 day die-away test(4). Diethyl phthalate was 87-92% degraded in 10-50 days at 25 deg C from a concn of 100 mg/L using 30 mg/L activated sludge(5). Electrolytic respirometer studies have shown that diethyl phthalate is readily biodegradable under aerobic conditions(6-8). Diethyl phthalate had aerobic aquatic half-lives of 0.39 days in a river die-away test, 4.33 days in MITI test, and 0.71 days using microcosm periphlton, and an aerobic soil half-life of 1.83 days agitated in aqueous suspension(9).

12.3 Bioaccumulative potential

Bluegill sunfish exposed to 9.42 ug/L of diethyl phthalate for 21 days had a measured BCF of 117(1). According to a classification scheme(2), this BCF value suggests that bioconcentration in aquatic organisms is high(SRC). An experimental log BCF of 2.07 was measured in clams(3).

12.4 Mobility in soil

A Koc value of diethyl phthalate of 1,726 was measured in podzol soil at pH 2.8 and 4.85% carbon, a value of 704 in alfisol soil at pH 6.7 and 1.25% carbon, a value of 320 in sediment at pH 7.1 and 1.58% carbon(1). An experimental log Koc of 1.99 was determined from unsaturated soil columns at pH 4.8(2). A Koc value of 69 was determined from measurements on soil samples from Broome County, NY(3). According to a classification scheme(4), these Koc values suggest that diethyl phthalate is expected to have low to high mobility in soil.

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

14.2 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.)

14.3 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.)

14.4 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.)

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
Diethyl phthalate	Diethyl phthalate	84-66-2	201-550-6
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/

Any questions regarding this SDS, Please send your inquiry to sds@xixisys.com

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