

Safety Data Sheet

Product name: Bis(2-ethylhexyl) phthalate

CAS No.: 117-81-7

Prepared in accordance with GB/T 16483, GB/T 17519

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

>Product identifier

- Product name: Bis(2-ethylhexyl) phthalate
- CBnumber: CB8708555
- CAS: 117-81-7
- EINECS Number: 204-211-0
- Synonyms: DOP,DEHP

>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: Linyi Tuohui New Materials Co., Ltd.
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SECTION 2: Hazards identification

>GHS Label elements, including precautionary statements

- Symbol(GHS)



- Signal word Danger

Precautionary statements

P405 Store locked up.

P311 Call a POISON CENTER or doctor/physician.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P202 Do not handle until all safety precautions have been read and understood.

P201 Obtain special instructions before use.

Hazard statements

H370 Causes damage to organs

H360 May damage fertility or the unborn child

H225 Highly Flammable liquid and vapour

Disposal

WARNING.Cancer - <https://oehha.ca.gov/proposition-65/chemicals/di2-ethylhexylphthalate-dehp>

SECTION 3: Composition/information on ingredients

>Substance

- Product name: Bis(2-ethylhexyl) phthalate
- Synonyms: DOP,DEHP
- CAS: 117-81-7
- EC number: 204-211-0
- MF: C₂₄H₃₈O₄
- MW: 390.56

SECTION 4: First aid measures

>Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

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. 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 2.2) and/or in section 11

>Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

>Extinguishing media**Suitable extinguishing media**

Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

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

>Special hazards arising from the substance or mixture

Carbon oxides Combustible.

Vapors 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.

>Advice for firefighters

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

>Further information

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

>NFPA 704

1
0

SECTION 6: Accidental release measures

>Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

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 carefully with liquid-absorbent material (e.g.

Chemisorb). Dispose of properly. Clean up affected area.

>Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

>Precautions for safe handling

> Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

> Hygiene measures

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

For precautions see section 2.2.

>Conditions for safe storage, including any incompatibilities

> Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

>Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

>control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

>Exposure controls

Personal protective equipment

Eye/face protection

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

Body Protection

protective clothing

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.

Control of environmental exposure

Do not let product enter drains.

Exposure limits

Potential occupational carcinogen. NIOSH REL: TWA 5, STEL 10, IDLH 5,000; OSHA PEL: TWA 5; ACGIH TLV: TWA 5 (adopted).

SECTION 9: Physical and chemical properties

>Information on basic physicochemical properties

- Appearancecolorless oily
- Odourodorless
- Odour ThresholdNot applicable
- pHat 20 °C neutral

- Melting point/freezing pointMelting point/range: -50 °C - lit.
- Initial boiling point and boiling range384 °C - lit.
- Flash point207 °C - closed cup
- Evaporation rateNo data available
- Flammability (solid, gas)No data available
- Upper/lower flammability or explosive limits Lower explosion limit: 0,3 %(V)
- Vapour pressure 1,6 hPa at 93,0 °C
- Vapour density >16 (vs air)
- Relative density0,985 g/cm³ at 25 °C - lit. No data available
- Water solubilityca.0,086 g/l at 25 °C - OECD Test Guideline 105- insoluble
- Partition coefficient: n-octanol/waterNo data available
- Autoignition temperature 390,0 °C
- Decomposition temperatureNo data available
- ViscosityViscosity, kinematic: ca.78,17 mm²/s at 20 °C - OECD Test Guideline 114 Viscosity, dynamic: 81 mPa.s at 20 °C
- Explosive propertiesNo data available
- Oxidizing propertiesNo data available
- Henry's Law Constant($\times 10^{-5}$ atm·m³/mol): 1.1 at 25 °C (calculated, Howard, 1989)

>Other safety information

No data available

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

No data available

>Conditions to avoid

Strong heating.

>Incompatible materials

Strong oxidizing agents

>Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

>Information on toxicological effects

Acute toxicity

LD0 Oral - Rat - male and female - > 20.000 mg/kg (OECD Test Guideline 401)

LC0 Inhalation - Rat - male and female - 4 h - > 10,62 mg/l (OECD Test Guideline 403)

Remarks: (highest concentration to be prepared) LD50 Dermal - Rabbit - 19.800 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h (OECD Test Guideline 405)

Respiratory or skin sensitization

(OECD Test Guideline 406)

- Mouse

Result: Does not cause respiratory sensitization. Remarks: (ECHA)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473

Result: negative

Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479

Result: negative

Test Type: Micronucleus test

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation Result: negative

Remarks: (ECHA)

Test Type: Chromosome aberration test Species: Rat

Cell type: Bone marrow Application Route: Oral

Method: OECD Test Guideline 475 Result: negative

Test Type: unscheduled DNA synthesis assay Species: Rat

Cell type: Liver cells Application Route: Oral

Method: OECD Test Guideline 486 Result: negative

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child. May damage fertility.

Specific target organ toxicity - single exposure

Specific target organ toxicity - repeated exposure

Aspiration hazard

Toxicity

Acute oral LD₅₀ for guinea pigs 26 gm/kg, mice 30 gm/kg, rats 30,600 mg/kg, rabbits 34 gm/kg (quoted, RTECS, 1985).

SECTION 12: Ecological information

>Toxicity

Toxicity to fish

flow-through test LC50 - Pimephales promelas (fathead minnow) - > 0,67 mg/l - 96 h

(OECD Test Guideline 203)

Remarks: (above the solubility limit in the test medium)

Toxicity to daphnia and other aquatic invertebrates

Immobilization EC50 - Daphnia magna (Water flea) - > 0,16 mg/l - 48 h

Remarks: (ECOTOX Database)

Toxicity to algae

EC50 - *Pseudokirchneriella subcapitata* - > 0,003 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria

static test NOEC - activated sludge - 1.000 mg/l - 3 h (OECD Test Guideline 209)

>Persistence and degradability

Biodegradability aerobic - Exposure time 29 d

Result: 82 % - Readily biodegradable. (OECD Test Guideline 301B)

>Bioaccumulative potential

Bioaccumulation *Oncorhynchus mykiss* (rainbow trout) - 100 d

- 0,014 mg/l(Bis(2-ethylhexyl) phthalate)

Bioconcentration factor (BCF): 113 Remarks: Does not bioaccumulate.

>Mobility in soil

No data available

>Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

>Toxics Screening Level

There was previously no Initial Threshold Screening Level (ITSL) for di-(2-ethylhexyl) phthalate (DEHP). The ITSL is now being established at 70 µg/m³ based on an annual averaging time.

>Other adverse effects

No data available

SECTION 13: Disposal considerations

>Waste treatment methods

> Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

>UN number

ADR/RID: - IMDG: - IATA: -

>UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

>Transport hazard class(es)

>Packaging group

>Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

>Special precautions for user

No data available

SECTION 15: Regulatory information

>Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

Measures for Environmental Management of New Chemical Substances

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

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

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