Shanghai Macklin Biochemical Technology Co., Ltd.
TEL:400-623-8666
FAX:021-50706099
E-mail:sales@macklin.cn
WEB:www.macklin.cn

1. IDENTIFICATION

Product name: Diisodecyl phthalate
CAS No. : 26761-40-0
Brand: Macklin
Company: Shanghai Macklin Biochemical Co.,Ltd.
Address: Shanghai Pudong Zhangjiang High-tech Park; 1st Building, 68 Huatuo Road; SHANGHAI CHINA
Zip code: 201206
Telephone: +86 21-50706066
Fax: +86 21-50706099
E-mail: sales@macklin.cn; tech@macklin.cn
Revision date: 2019/12/12

2. HAZARDS IDENTIFICATION

GHS classification

PHYSICAL HAZARDS

no data available

HEALTH HAZARDS

May be harmful in contact with skin. May cause long lasting harmful effects to aquatic life.

ENVIRONMENTAL HAZARDS

no data available

GHS label elements, including precautionary statements

Pictograms or hazard symbols

Signal word

Warning

Hazard statements

H313 May be harmful in contact with skin.
H413 May cause long lasting harmful effects to aquatic life

Precautionary statements

Prevention
P273 Avoid release to the environment.

Response
P312 Call a POISON CENTER/ doctor if you feel unwell.

Storage
no data available

Disposal
P501 Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components:Diisodecyl phthalate
CAS No.:26761-40-0
Chemical Formula:$C_{28}H_{46}O_4$

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. Rest.
4.2
Most important symptoms/effects, acute and delayed
No symptoms reported for any rate of exposure. (USCG, 1999)
4.3
Indication 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 as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on 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. Esters and related compounds

5. FIRE-FIGHTING MEASURES

5.1
Suitable extinguishing media
Extinguish with dry chemical, foam or carbon dioxide. Water may be ineffective on fire.
5.2
Specific hazards arising from the chemical
This chemical is combustible. (NTP, 1992)
5.3
Special protective actions for fire-fighters
Use water spray, powder, alcohol-resistant foam, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

6.1
Personal precautions, protective equipment and emergency procedures
Collect leaking and spilled liquid in sealable plastic or metal 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
Collect leaking and spilled liquid in sealable plastic or metal 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
ACCIDENTAL RELEASE MEASURES Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Methods and materials for containment and cleaning up Keep in suitable, closed containers for disposal.

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

Store the container at room temperature. Store separately from food containers or incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure limit values
MAK: carcinogen category: 3B

Biological limit values
no data available

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

Personal protective equipment

Eye/face protection
Wear safety goggles.
Skin protection
Protective gloves.
Respiratory protection
Use ventilation, local exhaust or breathing protection.
Thermal hazards
no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state
liquid
Odour
Mild odor
Melting point/freezing point
-127°C(lit.)
Boiling point or initial boiling point and boiling range
100°C
Flammability
Combustible.
Lower and upper explosion limit/flammability limit
Lower flammable limit: 0.3% by volume at 508 deg F
Flash point
235°C(lit.)
Auto-ignition temperature
755° F (USCG, 1999)
Decomposition temperature
no data available
pH
no data available
Kinematic viscosity
108 cP at 20 deg C
Solubility
Insoluble (NTP, 1992)
Partition coefficient n-octanol/water
log Kow = 10.36 (est)
Vapour pressure
5.63E-10mmHg at 25°C
Density and/or relative density
0.964g/cm3
Relative vapour density
15.4 (NTP, 1992) (Relative to Air)
Particle characteristics
no data available

10. STABILITY AND REACTIVITY

10.1
Reactivity
Attacks some forms of plastic.
10.2
Chemical stability
Stable under recommended storage conditions.
10.3
Possibility of hazardous reactions
CombustibleDIISODECYL 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
Strong oxidizing agents
10.6
Hazardous decomposition products
When heated to decomposition it emits acrid smoke and irritating vapors.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral: LD50 Rat oral 64 g/kg /64,000 mg/kg/
Inhalation: LC50 Rat inhalation >12.54 mg/L/4 hr Vestinol DZ
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
no data available

Reproductive toxicty
no data available

STOT-single exposure
The substance is irritating to the eyes and skin.
STOT-repeated exposure
The substance may have effects on the liver.

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.

12. ECOLOGICAL INFORMATION

12.1
Toxicity
Toxicity to fish: LC50; Species: Lepomis macrochirus (Bluegill) juvenile, length 29-40 mm; Conditions: freshwater, static, 22 deg C, pH 7.6-7.9, hardness 25-50 mg/L CaCO3, alkalinity 25-50 mg/L CaCO3; Concentration: 370 ug/L for 96 hr /> or = 95% purity
Toxicity to daphnia and other aquatic invertebrates: EC50; Species: Daphnia magna (Water flea) age < or =24 hr; Conditions: freshwater, static, 20 deg C, pH 7.6-7.9, hardness 25-50 mg/L CaCO3, alkalinity 25-50 mg/L CaCO3; Concentration: 20 ug/L for 48 hr; Effect: intoxication, immobilization /> or = 95% purity
Toxicity to algae: EC50; Species: Pseudokirchneriella subcapitata (Green algae); Conditions: freshwater, static, 22-24 deg C, pH 7.6-7.9, hardness 25-50 mg/L CaCO3, alkalinity 25-50 mg/L CaCO3; Concentration: 800 ug/L for 96 hr; Effect: decreased population abundance /> or = 95% purity
Toxicity to microorganisms: no data available
12.2
Persistence and degradability
AEROBIC: In a semi-continuous activated sludge test (Soap and Detergent Association biodegradation test method), the mean degradation for diisodecyl phthalate was 68% in 24 hr(1). In a die-away phase of the testing, it took 9 days to achieve 90% degradation(1). Diisodecyl phthalate is confirmed to be degradable in the screening procedure of the Japanese Ministry of Trade and Industry (MITI) which uses a mixed inoculum derived from soil, fresh water and sewage(2). In an acclimated shake flask CO2 evolution test, loss of parent compound (primary degradation) as well as CO2 evolution (ultimate degradation) was measured using an inoculum prepared from soil and sewage, >99% of diisodecyl phthalate was lost and 56% of theoretical CO2 was evolved after 28 days(3). The biodegradation half-life was 9.6 days with a 4.9 day lag(3). Diisodecyl phthalate, present at 100 mg/L, reached 2% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(4). Diisodecyl phthalate, present at a concentration of 100 ppm, was degraded 14 and 30% after three days cultivation in water from the Mino River and Akashi Beach, Japan, respectively(5). Diisodecyl biodegraded 67% from an initial concentration of 48 ppm and 100 ppm in 28 days in activated sludge at 22 and 25 deg C, respectively(6). Diisodecyl phthalate degraded 42% in 21 days at 25 deg C from a starting concentration of 100 ppm(6). An aerobic aquatic half-life of 23 days was given for diisodecyl phthalate(7).
12.3
Bioaccumulative potential
BCFs of <3.6 and <14.4 were measured for diisodecyl phthalate at chemical concentrations of 1 and 0.1 mg/L, respectively, using carp (Cyprinus carpio) which were exposed over an 8-week period(1). According to a classification scheme(2), these BCFs suggest that bioconcentration in aquatic organisms is low(SRC). The mean log BCF of diisodecyl phthalate in Daphnia magna as determined in a 21 day test using ring-labeled chemical was 2.06(3), corresponding to a BCF of 115(SRC). The mean log BCF in mussels (Mytilus edulis) was 3.54 between 14 and 28 days also using ring-labeled ester(4), corresponding to a BCF of 3467(SRC). However depuration was rapid in mussels, the half-life being 3.5 days(4).
12.4
Mobility in soil
Using a structure estimation method based on molecular connectivity indices(1), the log Koc of diisodecyl phthalate can be estimated to be 6.04(SRC). Other estimated log Koc values reported were 5.46 and 5.78(2). According to a classification scheme(3), these estimated log Koc values suggest that diisodecyl phthalate is expected to be immobile in soil. The average Koc of (14)C-diisodecyl phthalate using three standard USEPA sediments (supplied and characterized by the EPA) was measured at 2.86X10+5(4).
12.5
Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

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.

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

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question
EC number
247-977-1
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.

16. OTHER INFORMATION

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority.The products are supposed to be used promptly after purchase in consideration of safety.Some new information or amendments may be added afterwards.If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only.In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal.Safe usage conditions shall be set up on each user's own responsibility.