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1. IDENTIFICATION

Product name: Dioctyl adipate
CAS No. : 123-79-5
Brand: Macklin
Company: Shanghai Macklin Biochemical Co.,Ltd.
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Revision date: 2019/12/12

2. HAZARDS IDENTIFICATION

GHS classification

PHYSICAL HAZARDS

HEALTH HAZARDS

ENVIRONMENTAL HAZARDS

GHS label elements, including precautionary statements

Pictograms or hazard symbols

Signal word

Warning

Hazard statements

H315 Causes skin irritation
H319 Causes serious eye irritation

Precautionary statements

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name
Dioctyl adipate

Components:Dioctyl adipate
CAS No.:123-79-5
Chemical Formula:$C_{22}H_{42}O_4$

4. FIRST AID MEASURES

4.1
Description of necessary first-aid measures
If inhaled
Fresh air, rest.
Following skin contact
Remove contaminated clothes. Rinse 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.

4.2

Most important symptoms/effects, acute and delayed

no data available

4.3

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

Basic Treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary . Monitor for shock and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal . Esters and related compounds

5. FIRE-FIGHTING MEASURES

5.1

Suitable extinguishing media

Foam, carbon dioxide, dry chemical ...

5.2

Specific hazards arising from the chemical

no data available

5.3

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

6.2

Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Carefully collect remainder. Then store and dispose of according to local regulations.

6.3

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

Precautions 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.

Conditions for safe storage, including any incompatibilities

Separated from strong oxidants and strong acids. Provision to contain effluent from fire extinguishing. Store in an area without drain or sewer access.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure limit values

no data available

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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Liquid

Colour

COLORLESS OR VERY PALE AMBER LIQUID

Odour

SLIGHT, AROMATIC SMELL

Melting point/freezing point

-60°C

Boiling point or initial boiling point and boiling range

398.2°C at 760 mmHg

Flammability

Combustible.

Lower and upper explosion limit/flammability limit

no data available

Flash point

178.6°C

Auto-ignition temperature

340°C

Decomposition temperature

no data available

pH

no data available

Kinematic viscosity

1.89X10-2 Pa sec @ 7.49 deg C (280.65 K)

Solubility

INSOL IN WATER @ 25 DEG C; INSOL OR VERY SLIGHTLY SOL IN GLYCERINE & GLYCOLS; SOL IN MOST ORGANIC SOLVENTS

Partition coefficient n-octanol/water

8.1 (calculated)

Vapour pressure

8.50X10-7 mm Hg @ 20 deg C

Density and/or relative density

0.929 g/cm3

Relative vapour density

(air = 1): 12.8

Particle characteristics

no data available

10. STABILITY AND REACTIVITY

10.1

Reactivity

Reacts with strong oxidants and strong acids. This generates fire hazard.

10.2
Chemical stability
no data available
10.3
Possibility of hazardous reactions
no data available
10.4
Conditions to avoid
no data available
10.5
Incompatible materials
Can react with oxidizing materials.
10.6
Hazardous decomposition products
When heated to decomposition it emits acrid smoke and irritating fumes.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral: LD50 Rat oral 9110 mg/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
no data available
Reproductive toxicity
no data available
STOT-single exposure
no data available
STOT-repeated exposure
no data available
Aspiration hazard
no data available

12. ECOLOGICAL INFORMATION

12.1
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
12.2
Persistence and degradability
AEROBIC: In a semi-continuous activated sludge method used to simulate sewage treatment plant biodegradation, di-n-octyl adipate was observed to undergo primary degradation of 65-96% (at concns of 5 and 20 mg/l added/24 hr)(1); in a CO_2 evolution study, di-n-octyl adipate was observed to biodegrade 94% over a 35-day incubation period which corresponds to a first-order half-life of 2.7 days(1).
12.3
Bioaccumulative potential
A whole-fish BCF of 27 was observed for blue-gill fish exposed di-n-octyl adipate levels of 250 ug/l for a 28-day period(1). According to a classification scheme(2), this BCF suggests the potential for

bioconcentration in aquatic organisms is low.

12.4

Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc for di-n-octyl adipate can be estimated to be 57,000(SRC). According to a classification scheme(2), this estimated Koc value suggests that di-n-octyl adipate is expected to be immobile in soil.

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: no data available

IMDG: no data available

IATA: no data available

14.2

UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.3

Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.4

Packing group, if applicable

ADR/RID: no data available

IMDG: no data available

IATA: no data available

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

15.1

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

Chemical name

Common names and synonyms

CAS number
EC number
Dioctyl adipate
Dioctyl adipate
123-79-5
204-652-9
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.

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.