Chemical Safety Data Sheet MSDS / SDS

2-(2-butoxyethoxy)ethyl acetate SDS

Revision Date:2024-04-25 Revision Number:1

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

Product identifier

Product name: 2-(2-butoxyethoxy)ethyl acetate

CAS: 124-17-4

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: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

Telephone: +91 9550333722

SECTION 2: Hazards identification

Classification of the substance or mixture

Not classified.

GHS label elements, including precautionary statements

Signal word: No signal word

Hazard statement(s)

none

Precautionary statement(s)

Prevention

none

Response

none

Storage

none

Disposal

none

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name:	2-(2-butoxyethoxy)ethyl acetate
Common names and synonyms:	2-(2-butoxyethoxy)ethyl acetate
CAS number:	124-17-4
EC number:	204-685-9
Concentration:	100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

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.

Most important symptoms/effects, acute and delayed

Prolonged breathing of vapor may cause irritation and nausea. Contact with liquid may cause mild irritation of eyes and skin. Can be absorbed through skin in toxic amounts. (USCG, 1999)

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

Absorption, Distribution and Excretion

When diethylene glycol butyl ether (DGBE) and diethylene glycol monobutyl ether acetate (DGBEA) were applied to the skin for 5 min then washed, most (90%) of the material was recovered. When applied under occlusion for 24 hr, the calculated absorption rates for DGBEA were similar (1.58, 1.28 mg/cm sq/hr for males and females, respectively; mean=1.43) to those of DGBE (0.73, 1.46; mean=1.10 mg/cm sq/hr).

SECTION 5: Firefighting measures

Suitable extinguishing media

Foam, carbon dioxide, dry chem...

Specific hazards arising from the chemical

Combustible.

Special protective actions for fire-fighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

Environmental precautions

Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

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.

SECTION 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

Separated from strong oxidants. Ventilation along the floor.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

MAK: 85 mg/m3, 10 ppm; peak limitation category: I(1); pregnancy risk group: C

Biological limit values

no data available

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.

Individual 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:	Liquid. Not applicable.
Colour:	Colourless.
Odour:	MILD, NOT UNPLEASANT ODOR
Melting point/freezing point:	< -70 °C. Atm. press.:1 atm.

Boiling point or initial boiling point and boiling range:	245 °C. Atm. press.:1 atm.
Flammability:	Combustible.
Lower and upper explosion limit/flammability limit:	Lower flammable limit: 0.76% by volume; Upper flammable limit:5.0% by volume
Flash point:	116 °C. Atm. press.:1 atm.
Auto-ignition temperature:	290 °C. Atm. press.:1 atm.
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	kinematic viscosity (in mm2/s) = 4.68. Temperature:10.0°C.;kinematic viscosity (in mm2/s) = 3.519. Temperature:20°C.;kinematic viscosity (in mm2/s) = 2.771. Temperature:30.0°C.
Solubility:	Very soluble in acetone, ethyl ether, ethanol
Partition coefficient n-octanol/water:	log Pow = 1.7. Temperature:23 °C.
Vapour pressure:	0.1 hPa. Temperature:46 °C. Remarks:Lowest value measured.;Ca. 0.005 hPa. Temperature:20 °C. Remarks:Extrapolated.
Density and/or relative density:	976.5 kg/m3. Temperature:20 °C.
Relative vapour density:	(air = 1): 7.0
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

The substance can presumably form explosive peroxides. Reacts with strong oxidants.

Chemical stability

no data available

Possibility of hazardous reactions

CombustibleEsters 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.

Conditions to avoid

no data available

Incompatible materials

Glycol ethers, glycols, ketones, and alcohols undergo violent decomposition in contact with 68-72% perchloric acid

Hazardous decomposition products

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

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 - rat (male) - 11 920 mg/kg bw.

Inhalation: LC0 - rat (male/female) - > 400 ppm.

Dermal: LD50 - rabbit - 5.75 mL/kg bw.

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

The substance is mildly irritating to the eyes and skin.

STOT-repeated exposure

The substance defats the skin, which may cause dryness or cracking.

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.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - > 50 - < 70 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna - 664 mg/L - 48 h.

Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 1 570 mg/L - 72 h.

Toxicity to microorganisms: EC0 - activated sludge, industrial - 1 575 mg/L - 30 min. Remarks:Respiration rate.

Persistence and degradability

AEROBIC: Diethyleneglycol monobutyl ether acetate, present at 100 mg/L, reached 100% of its theoretical BOD in four weeks using an activated sludge inoculum at 30 mg/L and the Japanese MITI test(1). A 20-day biodegradation study using 2.5 ppm diethyleneglycol monobutyl ether acetate in BOD bottle mineralization dilution water and settled sewage seed at 20 deg C gave a theoretical BOD of 67.6%(2). The normal BOD curve for diethyleneglycol monobutyl ether acetate seeded with microorganisms from domestic sewage shows slow development that usually requires more than five days for the BOD value to reach 20 percent of the theoretical oxygen demand (40% at 14 days)(3). Acclimated microorganisms from the Kanawana River biodegrade diethyleneglycol monobutyl ether acetate much faster with theoretical BOD values of 84% after 10 days and 58% after 10 days using microorganisms acclimated for 59 and 28 days, respectively(3). The difficulty in oxidizing diethyleneglycol monobutyl ether acetate is apparently related to the butoxy group(3). Diethyleneglycol monobutyl ether acetate had theoretical BOD rates of 13.3, 18.4, 24.6, and 67.0% for BOD 5, 10, 15, and 20 days, respectively(4).

Bioaccumulative potential

An estimated BCF of 2 was calculated in fish for diethyleneglycol monobutyl ether acetate(SRC), using an estimated log Kow of 1.30(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of diethyleneglycol monobutyl ether acetate can be estimated to be 10(SRC). According to a classification scheme(2), this estimated Koc value suggests that diethyleneglycol monobutyl ether acetate is expected to have very high mobility in soil(SRC).

Other adverse effects

no data available

SECTION 13: Disposal considerations

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

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.)

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.)

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.)

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.)

Environmental hazards

ADR/RID: No
IMDG: No
IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

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

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.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Listed.

Korea Existing Chemicals List (KECL)

Listed.

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

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

See ICSC 0788. Check for peroxides prior to distillation; eliminate if found.

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