

SAFETY DATA SHEET



OXSOFT GPO***
11430

Version / Revision
Supersedes Version

4 .00***
3 .00***

Revision Date
Issuing date

01-Sep-2016
01-Sep-2016

SECTION 1: Identification

1.1. Product identifier

Identification of the
substance/preparation

OXSOFT GPO***

Chemical Name
CAS-No

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate
6422-86-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

**Use of the Substance /
Preparation**

plasticizer

Uses advised against

None

1.3. Details of the supplier of the safety data sheet

Supplier

OXEA Corporation
1505 West LBJ Freeway, Suite 400
Dallas, TX 75234
USA
Phone: +1 972 481 2700

Product Information

Product Stewardship
FAX: +49 (0)208 693 2053
email: psq@oxea-chemicals.com

1.4. Emergency telephone number

Emergency telephone number

in USA, call 800 424 9300
outside USA, call 703 527 3887, collect calls accepted
available 24/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This substance is not hazardous in accordance with paragraph (d) of §1910.1200 (GHS-US classification).

OSHA Specified Hazards

Not applicable.

2.2. Label elements

Not required according to §1910.1200 (GHS-US labeling).

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2.3. Other hazards

None known

SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	Concentration (%)
Bis(2-ethylhexyl)-1,4-benzenedicarboxylate	6422-86-2	> 96,0

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Keep at rest. Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.

Skin

Wash off immediately with soap and plenty of water. When symptoms persist or in all cases of doubt seek medical advice.

Eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion

Call a physician immediately. Do not induce vomiting without medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Main symptoms

None known.

Special hazard

None known.

4.3. Indication of any immediate medical attention and special treatment needed

General advice

Remove contaminated, soaked clothing immediately and dispose of safely. First aider needs to protect himself.

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media

foam, dry chemical, carbon dioxide (CO₂), water spray

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Under conditions giving incomplete combustion, hazardous gases produced may consist of:

carbon monoxide (CO)

carbon dioxide (CO₂)

Combustion gases of organic materials must in principle be graded as inhalation poisons

Vapours are heavier than air and may spread along floors

5.3. Advice for firefighters

Special protective equipment for firefighters

Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

Precautions for firefighting

Cool containers / tanks with water spray. Dike and collect water used to fight fire. Keep people away from and upwind of fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: For personal protective equipment see section 8. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Keep away from heat and sources of ignition.

For emergency responders: Personal protection see section 8.***

6.2. Environmental precautions

Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

6.3. Methods and material for containment and cleaning up

Methods for containment

Stop the flow of material, if possible without risk. Dike spilled material, where this is possible.

Methods for cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local regulations. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

6.4. Reference to other sections

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For personal protective equipment see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Provide sufficient air exchange and/or exhaust in work rooms.

Hygiene measures

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

Advice on the protection of the environment

See Section 8: Environmental exposure controls.

Incompatible products

strong acids
strong oxidizing agents

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material.

Technical measures/Storage conditions

Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits United States of America

No exposure limits established regarding ACGIH, OSHA Z-1 and OSHA Z-2.

8.2. Exposure controls

Appropriate Engineering controls

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Individual protection measures, such as personal protective equipment

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General industrial hygiene practice

Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

Eye protection

Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.

Hand protection

Wear protective gloves. Recommendations are listed below. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

Suitable material	nitrile rubber
Evaluation	according to EN 374: level 6
Glove thickness	approx 0,55 mm
Break through time	> 480 min

Suitable material	polyvinylchloride / nitrile rubber
Evaluation	according to EN 374: level 6
Glove thickness	approx 0,9 mm
Break through time	> 480 min

Skin and body protection

Impervious clothing. Wear face-shield and protective suit for abnormal processing problems.

Respiratory protection

Respirator with filter for organic vapour. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Equipment should conform to NIOSH.

Environmental exposure controls

If possible use in closed systems. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. Observe the exposure limits, clean exhaust air if needed. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	colourless
Odour	slight
Odour threshold	No data available
pH	No data available
Melting point/range	< -89 °F (< -67,2 °C) @ 1013 hPa***
Boiling point/range	707 °F (375 °C) @ 1 atm (101,3 kPa)

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Flash point	413,6 °F (212 °C) @ 1 atm (101,3 kPa)***				
Method	ASTM 3278***				
Evaporation rate	No data available				
Flammability (solid, gas)	Does not apply, the substance is a liquid				
Lower explosion limit	No data available				
Upper explosion limit	No data available				
Vapour pressure	***				
Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
< 0,001***	< 0,0001***	< 0,0001***	25***	77***	EU A.4***
Vapour density	13,5 (Air = 1) @ 20 °C (68 °F)				
Relative density					
Values	@ °C	@ °F	Method		
0,983	20	68	EU A.3***		
Solubility	0,4 µg/l @ 72,5 °F (22,5 °C), in water***				
log Pow	5,72 (calculated) OECD 107***				
Autoignition temperature	728,6 °F (387 °C) @ 980 hPa***				
Method	EU A.15***				
Decomposition temperature	No data available				
Viscosity	65,8 mPa*s @ 77 °F (25 °C)				
Method	dynamic, OECD 114***				

9.2. Other information

Molecular weight	390,56
Molecular formula	C24 H38 O4
Oxidizing properties	Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties
Conductivity	0,0029 µS/m @ 68 °F (20 °C)
Refractive Index	1,487 @ 68 °F (20 °C)
Explosive properties	Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties
Surface tension	32,7 mN/m @ 22 °C (71,6 °F), EU A.5***

SECTION 10: Stability and Reactivity

10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

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10.4. Conditions to avoid

Avoid contact with heat, sparks, open flame and static discharge. Avoid any source of ignition.

10.5. Incompatible materials

strong acids, strong oxidizing agents.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure Ingestion, Eye contact, Skin contact

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

Target Organ Systemic Toxicant - Single exposure

Based on available data, the classification criteria are not met for:

STOT SE

Target Organ Systemic Toxicant - Repeated exposure

Based on available data, the classification criteria are not met for:

STOT RE

Acute toxicity

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)

Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	> 5000 mg/kg	rat	
Dermal	LD50	> 19670 mg/kg	guinea pig	

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

Assessment

Based on available data, the classification criteria are not met for:

Acute oral toxicity

Acute dermal toxicity

For acute inhalation toxicity, no data are available

Irritation and corrosion

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)

Target Organ Effects	Species	Result	Method	
Skin	guinea pig	Mild skin irritation		
Eyes	rabbit	Mild eye irritation		

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

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Assessment

Based on available data, the classification criteria are not met for:
skin irritation/corrosion
eye irritation/corrosion

Sensitization				
Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)				
Target Organ Effects	Species	Evaluation	Method	
Skin	guinea pig	not sensitizing		

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

Assessment

Based on available data, the classification criteria are not met for:
Skin sensitization
For respiratory sensitization, no data are available

Subacute, subchronic and prolonged toxicity				
Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)				
Type	Dose	Species	Method	
Subacute toxicity	NOAEL: 885 mg/kg/d (28d)	rat, male/female	Oral	
Subacute toxicity	NOAEC: 46,3 mg/m ³ (10 d)	rat, male/female	Inhalation	
Subchronic toxicity	NOAEL: 277 - 309 mg/kg/d (90d)	rat	Oral	
Chronic toxicity	NOAEL: 79 - 102 mg/kg/d (104 weeks)	rat	Oral	

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

Assessment

Based on available data, the classification criteria are not met for:
STOT RE

Carcinogenicity, Mutagenicity, Reproductive toxicity					
Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)					
Type	Dose	Species	Evaluation	Method	
Mutagenicity		Bacteria	negative	OECD 471 (Ames)	
Mutagenicity		Mammalian cells	negative	OECD 473 (Chromosomal Aberration)	
Mutagenicity		Mammalian cells	negative	OECD 476 (Mammalian Gene Mutation)	
Developmental Toxicity	NOAEL 747 mg/kg/d	rat		OECD 414, Oral	Developmental toxicity
Developmental Toxicity	NOAEL 458 mg/kg/d	rat		OECD 414, Oral	Maternal toxicity

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Reproductive toxicity	NOAEL 500 - 1000 mg/kg/d	rat		OECD 416	Oral
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Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

CMR Classification

The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B

Evaluation

In vitro tests did not show mutagenic effects
Did not show reprotoxic effects in animal experiments
In the absence of specific alerts no cancer testing is required

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

Aspiration toxicity

Due to the viscosity, this product does not present an aspiration hazard

Note

Handle in accordance with good industrial hygiene and safety practice. Further details on substance data can be found in the registration dossier under the following link:
<http://echa.europa.eu/information-on-chemicals/registered-substances>.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity			
Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)			
Species	Exposure time	Dose	Method
Daphnia magna (Water flea)	48h	NOEC: $\geq 0,0014$ mg/l	
Daphnia magna (Water flea)	48h	EC50: $> 0,0014$ mg/l	
Pimephales promelas (fathead minnow)	96h	LC50: > 984 mg/l	
Algae	72h	NOEC: $\geq 0,86$ mg/l	Growth inhibition

12.2. Persistence and degradability

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

Biodegradation

40,2 % (28 d).

12.3. Bioaccumulative potential

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)		
Type	Result	Method
log Pow***	5,72***	calculated, OECD 107***

12.4. Mobility in soil

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Bis(2-ethylhexyl)-1,4-benzenedicarboxylate (6422-86-2)		
Type	Result	Method
Surface tension***	32,7 mN/m @ 22 °C (71,6 °F)***	EU A.5***

12.5. Results of PBT and vPvB assessment

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

12.6. Other adverse effects

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

No data available

Note

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product Information

Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.

Uncleaned empty packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

SECTION 14: Transport information

Section 14.1 - 14.6

D.O.T. (49CFR) Not restricted

ICAO-TI / IATA-DGR Not restricted

IMDG Not restricted

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14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code not applicable

SECTION 15: Regulatory information

Federal and State Regulations

Components of the product are listed in the quoted regulations. For details please refer to the regulations directly. This list is not exhaustive, please check for other applicable regulations.

Federal Regulations

This product is listed on the TSCA inventory

International Inventories

Bis(2-ethylhexyl)-1,4-benzenedicarboxylate, CAS: 6422-86-2

AICS (AU)
DSL (CA)
IECSC (CN)
EC-No. 2291769 (EU)
ENCS (3)-4053 (JP)
ISHL 4-(7)-1490 (JP)
KECI KE-02197 (KR)
PICCS (PH)
TSCA (US)
NZIoC-NZ May be used as single component chemical
TCSI (TW)

SECTION 16: Other information

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Hazard Rating Systems

NFPA (National Fire Protection Association)

Health Hazard 1
Fire Hazard 1
Reactivity 0

HMIS (Hazardous Material Information System)

Health Hazard 1
Flammability 1
Physical Hazard 0

Training advice

For effective first-aid, special training / education is needed.

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Sources of key data used to compile the datasheet

Information contained in this safety data sheet is based on Oxea owned data and public sources deemed valid or acceptable. The absence of data elements required by OSHA, ANSI or Annex II, Regulation 1907/2006/EC indicates, that no data meeting these requirements is available.

Further information for the safety data sheet

Changes against the previous version are marked by ***. Observe national and local legal requirements. For more information, other material safety data sheets or technical data sheets please consult the Oxea homepage (www.oxea-chemicals.com).

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End of Safety Data Sheet