SAFETY DATA SHEET

OXSOFT GPO
11430

Version / Revision	4	**Revision Date**	07-May-2020
Supersedes Version	3.00	**Issuing date**	15-May-2020

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

1.1. Product identifier

Identification of the substance/preparation **OXSOFT GPO**

Chemical Name Bis(2-ethylhexyl)-1,4-benzenedicarboxylate
CAS-No 6422-86-2
EC No. 229-176-9
Registration number (REACh) 01-2119446265-39

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

Identified uses
plasticizer
coatings
inks
additive
laboratory chemicals

Uses advised against None

1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification
OQ Chemicals GmbH
Rheinpromenade 4A
D-40789 Monheim
Germany

Product Information
Product Stewardship
FAX: +49 (0)208 693 2053
email: sc.psq@oq.com

1.4. Emergency telephone number

Emergency telephone number
+44 (0) 1235 239 670 (UK)
available 24/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Based on present data no classification and labelling is required according to Directive 1272/2008/EC and its amendments (CLP Regulation)

2.2. Label elements

Not required.

2.3. Other hazards

None known

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

SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	REACh-No	1272/2008/EC	Concentration (%)
Bis(2-ethylhexyl)-1,4-benzenedicarboxylate	6422-86-2	01-2119446265-39	-	> 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

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

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.

Temperature class
T2

7.3. Specific end use(s)

plasticizer
coatings
inks
additive
laboratory chemicals

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits European Union

No exposure limits established

Exposure limits UK

No exposure limits established.

DNEL & PNEC

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

DN(M)EL - long-term exposure - systemic effects - Inhalation	Other toxicological threshold
DN(M)EL - long-term exposure - systemic effects - Dermal	6,58 mg/kg bw/day

General population

DN(M)EL - long-term exposure - systemic effects - Inhalation	6,86 mg/m³
DN(M)EL - long-term exposure - systemic effects - Dermal	3,95 mg/kg bw/day
DN(M)EL - long-term exposure - systemic effects - Oral	3,95 mg/kg bw/day

Environment

PNEC aqua - freshwater	0,08 µg/l
PNEC aqua - marine water	0,008 µg/l
PNEC STP	1 mg/l
PNEC sediment - freshwater	8,28 mg/kg
PNEC sediment - marine water	0,828 mg/kg
PNEC soil	15 µg/kg
PNEC oral	52,7 mg/kg

8.2. Exposure controls

Special adaptations (REACh)
Not applicable.

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.

Personal protective equipment

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.
Equipment should conform to EN 166

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.

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.

Additional advice
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 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	< -67,2 °C @ 1013 hPa
Method	EU A.1
Boiling point/range	375 °C @ 1013 hPa
Method	EU A.2
Flash point	212 °C @ 1013 hPa
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 @ 22,5 °C, in water
log Pow	5,72 (calculated), OECD 107
Autoignition temperature	387 °C @ 980 hPa
Method	EU A.15
Decomposition temperature	No data available
Viscosity	65,8 mPa*s @ 25 °C
Method	dynamic, OECD 114

Explosive properties	Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties
Oxidizing properties	Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties

9.2. Other information

Molecular weight	390,56
Molecular formula	C24 H38 O4
Conductivity	0,0029 µS/m @ 20 °C
Refractive index	1,487 @ 20 °C
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.

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

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
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/m³ (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
Reproductive toxicity	NOAEL 500 - 1000 mg/kg/d	rat		OECD 416	Oral

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
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
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: >= 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: >= 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

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

ADR/RID Not restricted

ADN ADN: Container and Tanker
Not restricted

Not restricted

ICAO-TI / IATA-DGR

IMDG

Not restricted

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

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

Regulation 1272/2008, Annex VI
not listed

DI 2012/18/EU (Seveso III)
Category not subject

DI 1999/13/EC (VOC Guideline)

Component	Status
Bis(2-ethylhexyl)-1,4- benzenedicarboxylate CAS: 6422-86-2	not subject

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)

National regulatory information Great Britain

Releases to air (Pollution Inventory Substances)
not subject

Releases to water (Pollution Inventory Substances)
not subject

Releases to sewer (Pollution Inventory Substances)
not subject

For details and further information please refer to the original regulation

15.2. Chemical safety assessment

The Chemical Safety Report (CSR) has been generated. As this product is not hazardous under REACh, no Exposure Scenarios have been calculated.

SECTION 16: Other information

Abbreviations
A table of terms and abbreviations can be found under the following link:
http://echa.europa.eu/documents/10162/13632/information_requirements_r20_en.pdf

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

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on OQ 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 OQ homepage (www.chemicals.oq.com).
The annex is not required because the substance is not hazardous under REACh

Disclaimer
For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. OQ makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

End of Safety Data Sheet