

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product name: Dioctyl Phthalate
CAS Number: 117-81-7
EC Number: 204-211-0

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

Product use: Scientific research and development

1.3 Details of the supplier of the safety data sheet

Company name: East Harbour Group Ltd
20 Clough Road, Severalls Industrial Park
Colchester, Essex, CO4 9QS
United Kingdom

Telephone: +44 (0) 333 242 0100
Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008 Reproductive toxicity (Category 1B), H360FD

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word

Danger

Hazard statement(s)

H360FD

May damage fertility. May damage the unborn child.

Precautionary statement(s)

P201

Obtain special instructions before use.



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P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements None

Restricted to professional users

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting chemical(s)

Section 3: Composition/information on ingredients

3.1 Substances

Synonyms:	Bis(2-ethylhexyl) phthalate Phthalic acid bis (2-ethylhexyl ester)
Formula:	C ₂₄ H ₃₈ O ₄
Molecular weight:	390.56 g/mol
CAS-No.:	117-81-7
EC-No.:	204-211-0
Index-No.:	607-317-00-9

Component	Classification	Concentration
Bis(2-ethylhexyl) phthalate	Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)	
CAS-No. 117-81-7	Repr. 1B; H360FD	<= 100 %
EC-No. 204-211-0		
Index-No. 607-317-00-9		

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.



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If swallowed

After swallowing immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire-fighting measures

5.1 Fire Fighting Media and Instructions:

Suitable extinguishing media: Foam Carbon dioxide (CO₂) Dry powder.

Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides Combustible. Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.



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Section 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood.
Do not inhale substance/mixture.
Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No	Value	Control Parameters	Basis
Bis(2-ethylhexyl) phthalate	117-81-7	TWA	5 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Body Protection

Protective clothing

Respiratory protection

Required when vapours/aerosols are generated.

Ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.



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Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: oily
	Colour: colourless
Odor	Odourless
Odor Threshold	Not applicable
pH at 20 °C	Neutral
Melting Point/Freezing Point	Melting point/range: -50 °C - lit.
Initial boiling point and boiling range	384 °C - lit.
Flash Point	207 °C - closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosion Limits	Lower explosion limit: 0.3 %(V)
Vapor Pressure	1.6 hPa at 93.0 °C
Vapor Density	No data available
Density	0.985 g/cm ³ at 25 °C - lit.
Relative Density	No data available
Water Solubility	ca.0.086 g/l at 25 °C - OECD Test Guideline 105-insoluble
Partition Coefficient: n-octanol/water	No data available
Auto-ignition temperature	390.0 °C
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: ca.78.17 mm ² /s at 20 °C - OECD Test Guideline 114 Viscosity, dynamic: 81 mPa.s at 20 °C
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

No data available

Section 10: Stability and Reactivity

10.1 Reactivity	Forms explosive mixtures with air on intense heating
10.2 Chemical Stability	The product is chemically stable under standard ambient conditions (room temperature)
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	Strong heating
10.5 Incompatible materials	Strong oxidizing agents
10.6 Hazardous decomposition products	In event of fire, see section 5

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Section 11: Toxicological Information

Acute toxicity

LD0 Oral - Rat - male and female - > 20,000 mg/kg

(OECD Test Guideline 401)

LC0 Inhalation - Rat - male and female - 4 h - > 10.62 mg/l

(OECD Test Guideline 403)

Remarks: (highest concentration to be prepared)

LD50 Dermal - Rabbit - 19,800 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit Result: slight irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative (OECD Test Guideline 406)

- Mouse

Result: Does not cause respiratory sensitization.

Remarks: (ECHA)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Ames test Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD

Test Guideline 479

Result: negative

Test Type: Micronucleus test Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Result: negative Remarks: (ECHA)

Test Type: Chromosome aberration test



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Species: Rat
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 475
Result: negative
Test Type: unscheduled DNA synthesis assay
Species: Rat
Cell type: Liver cells
Application Route: Oral
Method: OECD Test Guideline 486
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child.
May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 104 Weeks - NOAEL (No observed adverse effect level) - 28.9 mg/kg
RTECS: TI0350000
Effects due to ingestion may include: Gastrointestinal disturbance

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

12.1 Toxicity

Ecotoxicity effects

Toxicity to fish

flow-through test LC50 - Pimephales promelas (fathead minnow) - > 0.67 mg/l - 96 h (OECD Test Guideline 203)

Remarks: (above the solubility limit in the test medium)

Toxicity to daphnia and other aquatic invertebrates

Immobilization EC50 - Daphnia magna (Water flea) - > 0.16 mg/l - 48 h Remarks: (ECOTOX Database)



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Toxicity to algae

EC50 - Pseudokirchneriella subcapitata - > 0.003 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria

static test NOEC - activated sludge - 1,000 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability

aerobic - Exposure time 29 d
Result: 82 % - Readily biodegradable.
(OECD Test Guideline 301B)

12.3 Bioaccumulative potential

Bioaccumulation

Oncorhynchus mykiss (rainbow trout) - 100 d
- 0.014 mg/l(Bis(2-ethylhexyl) phthalate)
Bioconcentration factor (BCF): 113
Remarks: Does not bioaccumulate.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

Section 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Section 14: Transport Information

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no



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14.6 Special precautions for user

No data available

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: Regulatory Information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59):

Bis(2-ethylhexyl) phthalate

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006.

Listed substance / Sunset Date:

Bis(2-ethylhexyl) phthalate / 21.02.2015

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g., use in scientific research and development which includes routine analytics or use as intermediate.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations, and articles (Annex XVII):

Bis(2-ethylhexyl) phthalate

Other regulations

Observe work restrictions regarding maternity protection in accordance with Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

Further information

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.