

Trade name: DEHP

Current version : 3.0.0, issued: 03.05.2018

Replaced version: 2.1.0, issued: 22.02.2018

Region: GB

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****DEHP**

Substance name bis(2-ethylhexyl) phthalate  
REACH registration no. 01-2119484611-38-0021

**Identification numbers**

CAS no. 117-81-7  
EC no. 204-211-0  
Index no. 607-317-00-9

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

Softener in articles  
Softener in medical devices  
Formulation  
Polymer processing  
industrial intermediate

**Uses advised against**

Use as substances or in mixtures, in concentrations greater than 0,1 % by weight of the plasticised material, in toys and childcare articles.

Justification Restriction under regulation 1907/2006.

Use in substances and preparations placed on the market for sale to the general public.

Justification See specific conditions in restriction 30 Annex XVII REACH.

**Reference to relevant exposure scenarios**

For an overview of the exact titles of the relevant exposure scenarios please refer to section 16 of this SDS.

**1.3 Details of the supplier of the safety data sheet****Address**

LIQUICHEM Handelsgesellschaft mbH  
Kajen 6 – 8  
D-20459 Hamburg

Telephone no. 040 89 97 89 0  
Fax no. 040 89 97 89 9  
e-mail hamburg@liquichem.de

**Information provided by / telephone**

+49 (0)40 899 789 0

**Advice on Safety Data Sheet**

sdb\_info@umco.de

**1.4 Emergency telephone number**

For medical advice (in German and English):  
+49 (0)551 192 40 (Giftinformationszentrum Nord)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Repr. 1B; H360FD

**Classification information**

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3 and 4 of Annex I to CLP.

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## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

#### Product identifier

117-81-7 (bis(2-ethylhexyl) phthalate)

#### Hazard pictograms



GHS08

#### Signal word

Danger

#### Hazard statement(s)

H360FD May damage fertility. May damage the unborn child.

#### Precautionary statement(s)

P201 Obtain special instructions before use.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P405 Store locked up.  
P501 Dispose of contents/container to hazardous or special waste collection point.

#### Supplemental label elements

"Restricted to professional users"

## 2.3 Other hazards

PBT assessment

The product is not considered to be a PBT.

vPvB assessment

The product is not considered to be a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

#### Chemical characterization

Substance name bis(2-ethylhexyl) phthalate

#### Identification numbers

CAS no. 117-81-7  
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### 3.2 Mixtures

Not applicable. The product is not a mixture.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. In case of persisting adverse effects, consult a physician.

#### After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air. In case of breathing difficulties give oxygen.

#### After skin contact

In case of contact with skin wash off immediately with soap and water.

#### After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.).

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**After ingestion**

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

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

No data available.

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

No data available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Dry chemical extinguisher; Carbon dioxide; Foam

**Unsuitable extinguishing media**

No data available.

**5.2 Special hazards arising from the substance or mixture**

In the event of fire, the following can be released: Carbon dioxide (CO<sub>2</sub>); Carbon monoxide (CO); Aldehydes; Ketones; Phthalic anhydrid; Combustion products of this material have to be classed invariably as respiratory poison.

**5.3 Advice for firefighters**

Use self-contained breathing apparatus. Cool endangered containers with water spray jet. Wear protective clothing.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Do not inhale vapours.

**For emergency responders**

No data available. Personal protective equipment (PPE) - see Section 8.

**6.2 Environmental precautions**

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

**6.3 Methods and material for containment and cleaning up**

Take up with absorbent material (e.g., sand, kieselguhr, universal binder). When picked up, treat material as prescribed under heading "Disposal considerations".

**6.4 Reference to other sections**

No data available.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Advice on safe handling**

Provide good ventilation at the work area (local exhaust ventilation, if necessary). Avoid eye, skin and clothing contact. Do not breathe steams or mist of the product.

**General protective and hygiene measures**

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - refrain from smoking. Take precautionary measures against static charges.

**7.2 Conditions for safe storage, including any incompatibilities****Technical measures and storage conditions**

Keep container tightly closed in a cool, well-ventilated place. Protect from heat and direct sunlight.

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**Requirements for storage rooms and vessels**

Always keep in containers of same material as the original one. Containers which are opened must be carefully closed and kept upright to prevent leakage.

**Advice on storage assembly**

Do not store together with: Oxidizing agents

**7.3 Specific end use(s)**

No data available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limit values**

No	Substance name	CAS no.	EC no.
1	bis(2-ethylhexyl) phthalate	117-81-7	204-211-0
<b>List of approved workplace exposure limits (WELs) / EH40</b>			
Bis(2-ethylhexyl)phthalate			
	STEL	10	mg/m <sup>3</sup>
	TWA	5	mg/m <sup>3</sup>

**DNEL, DMEL and PNEC values**

**DNEL values (worker)**

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	bis(2-ethylhexyl) phthalate			117-81-7 204-211-0	
	dermal	Long term (chronic)	systemic	9.6	mg/kg/day
	inhalative	Long term (chronic)	systemic	4.5	mg/m <sup>3</sup>

**DNEL value (consumer)**

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	bis(2-ethylhexyl) phthalate			117-81-7 204-211-0	
	oral	Long term (chronic)	systemic	0.29	mg/kg/day
	oral	Long term (chronic)	systemic	0.096	mg/kg/day
	Remarks: for pregnant women				
	oral	Long term (chronic)	systemic	0.048	mg/kg/day
	Remarks: for children				
	dermal	Long term (chronic)	systemic	2.9	mg/kg/day
	dermal	Long term (chronic)	systemic	0.96	mg/kg/day
	Remarks: for children and pregnant women				
	inhalative	Long term (chronic)	systemic	0.67	mg/m <sup>3</sup>
	inhalative	Long term (chronic)	systemic	0.22	mg/m <sup>3</sup>
	Remarks: for pregnant women				
	inhalative	Long term (chronic)	systemic	0.16	mg/m <sup>3</sup>
	Remarks: for children				

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**PNEC values**

No	Substance name	CAS / EC no	
	ecological compartment	Type	Value
1	bis(2-ethylhexyl) phthalate	117-81-7 204-211-0	
	water	fresh water sediment	100 mg/kg
	with reference to: dry weight		
	water	marine water sediment	10 mg/kg
	with reference to: dry weight		
	soil	-	13 mg/kg
	with reference to: dry weight		
	sewage treatment plant	-	201 mg/L
	secondary poisoning	-	3.3 mg/kg food

**8.2 Exposure controls**

**Appropriate engineering controls**

No data available.

**Personal protective equipment**

**Respiratory protection**

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

**Eye / face protection**

Tightly fitting safety glasses (EN 166).

**Hand protection**

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product . Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material

PVC

Material thickness

1.1

mm

Breakthrough time

>

60

min

**Other**

Normal chemical work clothing. Protective shoes

**Environmental exposure controls**

No data available.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

<b>Form/Colour</b>	
Liquid, oily	
colourless	
<b>Odour</b>	
No data available	
<b>Odour threshold</b>	
No data available	
<b>pH value</b>	
No data available	
<b>Boiling point / boiling range</b>	
Value	374.15 °C
Reference pressure	1022 mbar

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Melting point / melting range			
Value	-55	-	-50 °C

Decomposition point / decomposition range			
No data available			

Flash point			
No data available			

Auto-ignition temperature			
No data available			

Oxidising properties			
No data available			

Explosive properties			
No data available			

Flammability (solid, gas)			
No data available			

Lower flammability or explosive limits			
No data available			

Upper flammability or explosive limits			
No data available			

Vapour pressure			
Value	1.8	-	3.4 *10e-5 Pa
Reference temperature			20-25 °C
Method	calculated		

Vapour density			
No data available			

Evaporation rate			
No data available			

Relative density			
No data available			

Density			
Value	0.98		g/cm <sup>3</sup>
Reference temperature	20		°C
Reference pressure	1013		mbar

Solubility in water			
Value	0.003		mg/l
Reference temperature	20		°C

Solubility(ies)			
No data available			

Partition coefficient: n-octanol/water			
log Pow			7.5

Viscosity			
No data available			

**9.2 Other information**

Other information			
No data available.			

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Stable at ambient temperature.

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**10.2 Chemical stability**

The product is stable.

**10.3 Possibility of hazardous reactions**

No data available.

**10.4 Conditions to avoid**

Temperatures > 200 °C.

**10.5 Incompatible materials**

Oxidizing agents

**10.6 Hazardous decomposition products**

In case of fire: see section 5.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute oral toxicity			
LD0	>	20000	mg/kg/bw
Species	rats (male/female)		
Method	OECD 401		
Source	CSR		
Acute dermal toxicity			
LD50		19800	mg/kg/bw
Species	rabbit		
Source	CSR		
Acute inhalational toxicity			
LC0	>	10620	mg/m <sup>3</sup>
Method	OECD 403		
Source	CSR		
Skin corrosion/irritation			
Species	rabbit		
Method	OECD 404		
Source	CSR		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Serious eye damage/irritation			
Duration of exposure		72	h
Species	rabbit		
Method	OECD 405		
Source	CSR		
Evaluation	non-irritant		
Respiratory or skin sensitisation			
Route of exposure	Skin		
Duration of exposure		24	h
Species	guinea pig		
Method	OECD 406		
Source	CSR		
Evaluation	non-sensitizing		
Route of exposure	respiratory tract		
Species	mouse		
Source	CSR		
Evaluation	non-sensitizing		

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<b>Germ cell mutagenicity</b>	
No data available	
<b>Reproduction toxicity</b>	
No data available	
<b>Carcinogenicity</b>	
Route of exposure	oral
Type of examination	NOAEL
Species	rat (male)
Method	OECD 453
Source	CSR
	28.9 mg/kg
<b>STOT - single exposure</b>	
No data available	
<b>STOT - repeated exposure</b>	
No data available	
<b>Aspiration hazard</b>	
No data available	
<b>Other information</b>	
Exercise customary precautions when handling chemicals.	

**SECTION 12: Ecological information**

**12.1 Toxicity**

<b>Toxicity to fish (acute)</b>			
LC50	>	0.326	mg/l
Duration of exposure		96	h
Source	CSR		
LC0	>	100	mg/l
Duration of exposure		96	h
Species	Brachydanio rerio		
Method	OECD 203		
Source	CSR		
<b>Toxicity to fish (chronic)</b>			
No data available			
<b>Toxicity to Daphnia (acute)</b>			
EC50	>	1	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	CSR		
<b>Toxicity to Daphnia (chronic)</b>			
No data available			
<b>Toxicity to algae (acute)</b>			
EC50	>	0.1	mg/l
Duration of exposure		96	h
Species	Selenastrum capricornutum		
Method	OECD 201		
Source	CSR		



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<b>Toxicity to algae (chronic)</b>	
No data available	

<b>Bacteria toxicity</b>		
NOEC	1000	mg/l
Duration of exposure	3	h
Species	activated sludge	
Reference substance	fresh water	
Method	OECD 209	
Source	CSR	

**12.2 Persistence and degradability**

<b>Biodegradability</b>		
Value	82	%
Duration	28	day(s)
Method	OECD 301 B	
Source	CSR	
Evaluation	readily biodegradable	

**12.3 Bioaccumulative potential**

<b>Partition coefficient: n-octanol/water</b>	
log Pow	7.5

**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

<b>Results of PBT and vPvB assessment</b>	
PBT assessment	The product is not considered to be a PBT.
vPvB assessment	The product is not considered to be a vPvB.

**12.6 Other adverse effects**

No data available.

**12.7 Other information**

<b>Other information</b>	
Do not discharge product unmonitored into the environment.	

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

**Packaging**

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

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## SECTION 14: Transport information

### 14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

### 14.2 Transport IMDG

The product is not subject to IMDG regulations.

### 14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

### 14.4 Other information

No data available.

### 14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

### 14.6 Special precautions for user

No data available.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

## SECTION 15: Regulatory information

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

#### EU regulations

#### Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

The substance is considered being subject to Authorisation according to REACH regulation (EC) 1907/2006, annexe XIV.

No	Substance name	CAS no.	EC no.
1	bis(2-ethylhexyl) phthalate	117-81-7	204-211-0

#### REACH candidate list of substances of very high concern (SVHC) for authorisation

The substance meets the criteria in Article 57 in association with Article 59 of the REACH regulation (EC) 1907/2006 and is placed on the list of candidates considered for inclusion in annexe XIV (substances subject to Authorisation).

No	Substance name	CAS no.	EC no.
1	bis(2-ethylhexyl) phthalate	117-81-7	204-211-0

#### Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES

The product is considered being subject to REACH regulation (EC) 1907/2006 annexe XVII. No 3

The substance is considered being subject to REACH regulation (EC) 1907/2006 annexe XVII.

No	Substance name	CAS no.	EC no.	No
1	bis(2-ethylhexyl) phthalate	117-81-7	204-211-0	30, 51

#### Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This substance is not subject to Part I or 2 of Annex I

### 15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance.

## SECTION 16: Other information

#### Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EU

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

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**List of existing exposition scenarios**

ES001                    Formulation and (re)packing of substance and mixtures - industrial use  
ES002                    Formulation in materials - industrial use  
ES003                    Use as process chemical - industrial use

**Department issuing safety data sheet**

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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