

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**
**Product Identifier**

Perihalan Produk: **Butoxycarbonylmethyl butyl phthalate, 95+%**  
 Product Description: **Butoxycarbonylmethyl butyl phthalate, 95+%**  
 Cat No. : Z36164  
 Molecular Formula C18 H24 O6

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

Recommended Use Laboratory chemicals.  
 Uses advised against

**Company**

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd  
 Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square,  
 No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,  
 Selangor Darul Ehsan, Malaysia.  
 Main line: +60 3-5525 7888

**Supplier**

E-mail address Enquiry.my@thermofisher.com

**Emergency Telephone Number**

Tel: +03-5525 7888  
 CHEMTREC Malaysia 1-800-815-308 (Malay)  
 CHEMTREC Malaysia (Kuala Lumpur) +(60)-327884561 (Malay)

**SECTION 2: HAZARDS IDENTIFICATION**
**Classification of the substance or mixture**

Acute Inhalation Toxicity - Vapors	Category 4 (H332)
Reproductive Toxicity	Category 1A (H360Df)
Chronic aquatic toxicity	Category 2 (H411)

**Label Elements**


Signal Word

Danger

**Hazard Statements**

H332 - Harmful if inhaled

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H411 - Toxic to aquatic life with long lasting effects  
H360Df - May damage the unborn child. Suspected of damaging fertility

## Precautionary Statements

### Prevention

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

### Response

P308 + P313 - IF exposed or concerned: Get medical advice/attention

### Storage

P403 - Store in a well-ventilated place

### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

## Other Hazards

Contains a known or suspected endocrine disruptor  
Included in the list established in accordance with Article 59(1) for having endocrine disrupting properties  
Contains a substance on the National Authorities Endocrine Disruptor Lists

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
1,2-Benzenedicarboxylic acid, 2-butoxy-2-oxyethyl butyl ester	85-70-1	> 90
Dibutyl phthalate	84-74-2	< 10

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.
<b>Ingestion</b>	Clean mouth with water. Get medical attention.
<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

### Most important symptoms and effects, both acute and delayed

No information available.

### Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

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## Extinguishing media

### **Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

### **Extinguishing media which must not be used for safety reasons**

No information available.

## Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

## **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

## Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation.

### Environmental precautions

Do not flush into surface water or sanitary sewer system.

### Methods and Material for Containment and Cleaning Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Handle product only in closed system or provide appropriate exhaust ventilation.

### Conditions for Safe Storage, Including any Incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

### Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### **Control Parameters**

Component	Malaysia	ACGIH TLV	OSHA PEL
Dibutyl phthalate		TWA: 5 mg/m <sup>3</sup>	(Vacated) TWA: 5 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>

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Component	European Union	The United Kingdom	Germany
Dibutyl phthalate		STEL: 10 mg/m <sup>3</sup> 15 min TWA: 5 mg/m <sup>3</sup> 8 hr	TWA: 0.05 ppm (8 Stunden). AGW - exposure factor 2 TWA: 0.58 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 2 TWA: 0.05 ppm (8 Stunden). MAK can occur as vapor and aerosol at the same time TWA: 0.58 mg/m <sup>3</sup> (8 Stunden). MAK can occur as vapor and aerosol at the same time Höhepunkt: 0.1 ppm Höhepunkt: 1.16 mg/m <sup>3</sup>

## Exposure Controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Goggles

#### Hand Protection

Protective gloves

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

#### Recommended Filter type:

Particulates filter conforming to EN 143 Acid gases filter Type E Yellow conforming to EN14387

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

When RPE is used a face piece Fit Test should be conducted

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

Prevent product from entering drains Do not allow material to contaminate ground water system Local authorities should be advised if significant spillages cannot be contained

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### Appearance

No information available

#### Physical State

Viscous liquid Liquid

#### Odor

Slight

#### Odor Threshold

No data available

#### pH

No information available

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Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	220 °C / 428 °F	@ 10 mmHg
Flash Point	199 °C / 390.2 °F	Method - No information available
Evaporation Rate	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	3.9 mmHg @ 200 °C	
Vapor Density	No data available	(Air = 1.0)
Specific Gravity / Density	1.100	
Bulk Density	Not applicable	Liquid
Water Solubility	<0.1%	practically insoluble
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	log Pow	
Dibutyl phthalate	4.79	
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	No data available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	
Molecular Formula	C18 H24 O6	
Molecular Weight	336.38	

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

None known, based on information available.

### Chemical Stability

Stable.

### Possibility of Hazardous Reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	No information available.

### Conditions to Avoid

Incompatible products.

### Incompatible Materials

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Strong oxidizing agents.

## Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Product Information

##### (a) acute toxicity;

Oral

Based on available data, the classification criteria are not met

Dermal

Based on available data, the classification criteria are not met

Inhalation

Category 4

### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,2-Benzenedicarboxylic acid, 2-butoxy-2-oxyethyl butyl ester	LD50 = 7 g/kg ( Rat )	-	-
Dibutyl phthalate	LD50 = 7499 mg/kg ( Rat )	>20000 mg/kg ( Rabbit )	LC50 >= 15.68 mg/L ( Rat ) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

##### (d) respiratory or skin sensitization;

Respiratory

No data available

Skin

No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

The table below indicates whether each agency has listed any ingredient as a carcinogen

##### (g) reproductive toxicity;

Teratogenicity

Category 1A

Teratogenic effects have occurred in experimental animals.

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs

No information available.

(j) aspiration hazard; No data available

#### Other Adverse Effects

The toxicological properties have not been fully investigated.

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**Symptoms / effects, both acute and delayed** No information available.

## Endocrine Disrupting Properties

**Assess endocrine disrupting properties for human health**

Substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 Contains a substance on the National Authorities Endocrine Disruptor Lists

Component	EU National Authorities Endocrine Disruptor Lists - Health
Dibutyl phthalate 84-74-2 ( < 10 )	List I

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity effects

The product contains following substances which are hazardous for the environment. Contains a substance which is: Very toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Dibutyl phthalate	LC50: 0.42 - 1.28 mg/L, 96h static (Lepomis macrochirus) LC50: 1.24 - 5.3 mg/L, 96h static (Oncorhynchus mykiss) LC50: > 1.24 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 0.31 - 5.45 mg/L, 96h static (Pimephales promelas) LC50: 0.71 - 1.2 mg/L, 96h flow-through (Pimephales promelas) LC50: 1.38 - 1.74 mg/L, 96h flow-through (Lepomis macrochirus)	EC50: = 2.99 mg/L, 48h Static (Daphnia magna) EC50: = 3.4 mg/L, 48h (Daphnia magna)	EC50: = 0.4 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: = 1.2 mg/L, 72h (Desmodesmus subspicatus)	EC50 = 10.9 mg/L 30 min EC50 = 10.9 mg/L 5 min EC50 = 11.1 mg/L 15 min EC50 = 2.2 mg/L 24 h

### Persistence and degradability

**Persistence**

**Degradation in sewage treatment plant**

Insoluble in water, May persist, based on information available.

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

### Bioaccumulative potential

May have some potential to bioaccumulate

Component	log Pow	Bioconcentration factor (BCF)
Dibutyl phthalate	4.79	No data available

### Mobility in soil

Spillage unlikely to penetrate soil. The product is insoluble and sinks in water. The product evaporates slowly. Is not likely mobile in the environment due its low water solubility. Spillage unlikely to penetrate soil.

### Endocrine Disruptor Information

Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances
Dibutyl phthalate	Group I Chemical	High Exposure Concern

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Other adverse effects No information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### **Waste from Residues/Unused Products**

Waste is classified as hazardous Dispose of in accordance with the European Directives on waste and hazardous waste Dispose of in accordance with local regulations

#### **Contaminated Packaging**

Dispose of this container to hazardous or special waste collection point.

#### **Other Information**

Do not flush to sewer Waste codes should be assigned by the user based on the application for which the product was used Do not empty into drains Do not let this chemical enter the environment

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

**UN-No** UN3082  
**Hazard Class** 9  
**Packing Group** III  
**Proper Shipping Name** Environmentally hazardous substances, liquid, n.o.s.

### Road and Rail Transport

**UN-No** UN3082  
**Hazard Class** 9  
**Packing Group** III  
**Proper Shipping Name** Environmentally hazardous substances, liquid, n.o.s.

### IATA

**UN-No** UN3082  
**Hazard Class** 9  
**Packing Group** III  
**Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.\*

**Special Precautions for User** No special precautions required

## SECTION 15: REGULATORY INFORMATION

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

**International Inventories** X = listed

Component	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	IECSC	AICS	KECL
1,2-Benzenedicarboxylic acid, 2-butoxy-2-oxyethyl butyl ester	201-624-8	X	-	-	X	X	-	X	KE-04360
Dibutyl phthalate	201-557-4	X	X	X	X	X	X	X	KE-02214

### National Regulations



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**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 16: OTHER INFORMATION

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**POW** - Partition coefficient Octanol:Water

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### **Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Prepared By**

**Revision Date**

**Revision Summary**

Health, Safety and Environmental Department

31-Mar-2025

Not applicable.

**In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**

### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**