

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**

Perihal Produk:

Product Description:

Cat No. :

Synonyms

**Benzoic acid**
**Benzoic acid**

149130000; 149130010; 149130025; 149130250; 149135000

Benzenecarboxylic acid; Benzenemethanoic acid; Phenylcarboxylic acid; Phenylformic acid; Benzeneformic acid; Carboxybenzene

CAS No

65-85-0

Molecular Formula

C7 H6 O2

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

Recommended Use

Laboratory chemicals.

Uses advised against

No Information available

**Company**

 Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd  
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 CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

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

Skin Corrosion/Irritation	Category 2 (H315)
Serious Eye Damage/Eye Irritation	Category 1 (H318)
Specific target organ toxicity - (repeated exposure)	Category 1 (H372)

**Label Elements**


Signal Word

Danger

Hazard Statements

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H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H372 - Causes damage to organs through prolonged or repeated exposure if inhaled

## Precautionary Statements

### Prevention

P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

### Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor  
P362 + P364 - Take off contaminated clothing and wash it before reuse

### Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

### Disposal

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

## Other Hazards

May form combustible dust concentrations in air  
Toxic to terrestrial vertebrates  
This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Benzoic acid	65-85-0	>95

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### Eye Contact

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

#### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.

#### Ingestion

Do NOT induce vomiting. Get medical attention.

#### Inhalation

Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

#### Self-Protection of the First Aider

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

Causes eye burns.

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

#### Notes to Physician

Treat symptomatically.

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## SECTION 5: FIREFIGHTING MEASURES

### 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

Dust can form an explosive mixture with air. Keep product and empty container away from heat and sources of ignition. 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

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin and eyes.

### Environmental precautions

See Section 12 for additional Ecological Information.

### Methods and Material for Containment and Cleaning Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Avoid dust formation. Do not breathe dust.

### Conditions for Safe Storage, Including any Incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame.

### Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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## Control Parameters

Component	Malaysia	ACGIH TLV	OSHA PEL
Benzoic acid		TWA: 0.5 mg/m <sup>3</sup> Skin	

Component	European Union	The United Kingdom	Germany
Benzoic acid			TWA: 0.1 ppm (8 Stunden). AGW - exposure factor 4 TWA: 0.5 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 4 TWA: 0.1 ppm (8 Stunden). MAK can occur as vapor and aerosol at the same time TWA: 0.5 mg/m <sup>3</sup> (8 Stunden). MAK can occur as vapor and aerosol at the same time TWA: 0.39 ppm (8 Stunden). MAK can occur as vapor and aerosol at the same time TWA: 2 mg/m <sup>3</sup> (8 Stunden). MAK can occur as vapor and aerosol at the same time Höhepunkt: 2 mg/m <sup>3</sup> Höhepunkt: 0.4 ppm Höhepunkt: 0.78 ppm Höhepunkt: 4 mg/m <sup>3</sup> Haut

## Exposure Controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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 compatibility, 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

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

No information available

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Off-white	
Physical State	Solid	
Odor	aromatic	
Odor Threshold	No data available	
pH	2.5-3.5	2.9 g/l water
Melting Point/Range	121 - 123 °C / 249.8 - 253.4 °F	
Softening Point	No data available	
Boiling Point/Range	249 °C / 480.2 °F	@ 760 mmHg
Flash Point	121 °C / 249.8 °F	<b>Method -</b> No information available
Evaporation Rate	Not applicable	Solid
Flammability (solid,gas)	No information available	
Explosion Limits	<b>Lower</b> 1.4 <b>Upper</b> 8.2	
Vapor Pressure	23 hPa @ 20 °C	
Vapor Density	Not applicable	Solid
Specific Gravity / Density	No data available	
Bulk Density	No data available	
Water Solubility	Soluble	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	<b>log Pow</b>	
Benzoic acid	1.88	
Autoignition Temperature	570 °C / 1058 °F	
Decomposition Temperature	No data available	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	
Molecular Formula	C7 H6 O2	
Molecular Weight	122.12	

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

None known, based on information available.

### Chemical Stability

Stable under normal conditions.

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## Possibility of Hazardous Reactions

### **Hazardous Polymerization Hazardous Reactions**

Hazardous polymerization does not occur.  
aqueous solution, May react with metals and lead to the formation of flammable hydrogen gas.

## Conditions to Avoid

Incompatible products. Avoid dust formation.

## Incompatible Materials

Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents. Metals.

## 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**

Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Benzoic acid	1700 mg/kg ( Rat ) 2565 mg/kg ( Rat )	LD50 > 10000 mg/kg ( Rabbit )	LC50 > 12.2 mg/L ( Rat ) 4 h

##### **(b) skin corrosion/irritation; Observational endpoint**

Category 2

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

##### **(c) serious eye damage/irritation;**

Category 1

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

**Respiratory**

Based on available data, the classification criteria are not met

**Skin**

Based on available data, the classification criteria are not met

No information available

##### **(e) germ cell mutagenicity;**

Based on available data, the classification criteria are not met

Not mutagenic in AMES Test

##### **(f) carcinogenicity;**

Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

##### **(g) reproductive toxicity;**

Based on available data, the classification criteria are not met

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(h) STOT-single exposure;	Based on available data, the classification criteria are not met
(i) STOT-repeated exposure;	Category 1
Route of exposure Target Organs	Inhalation Lungs.
(j) aspiration hazard;	Not applicable Solid
Other Adverse Effects	The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information
Symptoms / effects, both acute and delayed	No information available.
Endocrine Disrupting Properties	Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity effects

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Benzoic acid	LC50: = 44.6 mg/L, 96h static (Lepomis macrochirus)	EC50: = 860 mg/L, 48h Static (Daphnia magna)		EC50 = 16.85 mg/L 30 min EC50 = 16.9 mg/L 15 min

<u>Persistence and degradability</u>	Readily biodegradable
Persistence	Soluble in water, Persistence is unlikely, based on information available.

<u>Bioaccumulative potential</u>	Bioaccumulation is unlikely
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Component	log Pow	Bioconcentration factor (BCF)
Benzoic acid	1.88	No data available

<u>Mobility in soil</u>	The product is water soluble, and may spread in water systems. Is predicted to have low mobility in the environment. Highly mobile in soils.
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<u>Endocrine Disruptor Information</u>	This product does not contain any known or suspected endocrine disruptors
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<u>Other adverse effects</u>	No information available
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## SECTION 13: DISPOSAL CONSIDERATIONS

<u>Waste treatment methods</u>	
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.

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## Other Information

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 flush to sewer

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

Not regulated

### Road and Rail Transport

Not regulated

### IATA

Not regulated

### 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
Benzoic acid	200-618-2	X	X	X	X	X	X	X	KE-02696

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Benzoic acid				Annex I - Y34

### National Regulations

#### 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%



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

**IMO/MDG** - 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

Revision Date

21-Mar-2025

Revision Summary

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**