

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

## Section 1 - Identification

Product Name	<u>Benzoic acid</u>
CAS No	65-85-0
Synonyms	Benzenecarboxylic acid; Benzenemethanoic acid; Phenylcarboxylic acid; Phenylformic acid; Benzeneformic acid; Carboxybenzene

Product Code	<b>A63-500; A65-500; A68-30</b>
Address	ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia
Emergency Tel.	<b>CHEMTREC®</b> <b>03 9757 4559 or +613 9757 4559</b>
Telephone / Fax Numbers	Tel: 1300 735 292 Fax: 1800 067 639
E-mail address	ANZinfo@thermofisher.com

Recommended Use	Laboratory chemicals.
Uses advised against	This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

## Section 2 - Hazard(s) Identification

### Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

#### Physical hazards

No hazards identified

#### Health hazards

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

#### Environmental hazards

No hazards identified

### Label Elements



Health Hazard



Corrosion

**Signal Word****Danger****Hazard Statements**

H315 - Causes skin irritation

H318 - Causes serious eye damage

H372 - Causes damage to organs through prolonged or repeated exposure

May form combustible dust concentrations in air

**Precautionary Statements**

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P264 - Wash face, hands and any exposed skin thoroughly after handling

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

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

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

**Other information**

May form combustible dust concentrations in air

Toxic to terrestrial vertebrates

## Section 3 - Composition and Information on Ingredients

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

## Section 4 - First Aid Measures

<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<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.
<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.

**Most important symptoms and effects** Causes eye burns.

**Notes to Physician** Treat symptomatically.

## Section 5 - Fire Fighting Measures

### 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.

### Hazardous Decomposition Products

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

### Specific Hazards Arising from the Chemical

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.

### Special protective equipment and precautions 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

### 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 for Containment and Clean Up

#### Clean-up methods - small spillage

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

#### Clean-up methods - large spillage

Typically only supplied in small quantities as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

### 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.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## Section 8 - Exposure Controls and Personal Protection

### Exposure limits

DE - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Benzoic acid			TWA: 0.5 mg/m <sup>3</sup> Skin		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 Höhepunkt: 2 mg/m <sup>3</sup> Höhepunkt: 0.4 ppm Haut

### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

### 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 (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

#### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Natural rubber	See manufacturers	-	AS/NZS 2161	(minimum requirement)
Butyl rubber	recommendations			
Nitrile rubber				
Neoprene				
PVC				

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.

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

#### Respiratory Protection

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or

**Recommended Filter type:**  
**Recommended half mask:-**

other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices  
 Particulates filter conforming to EN 143 (or AUS/NZ equivalent)  
 Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent)  
 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.

## Section 9 - Physical and Chemical Properties

### Information on basic physical and chemical properties

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

## Section 10 - Stability and Reactivity

<b>Reactivity</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products, Avoid dust formation.
<b>Incompatible Materials</b>	Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents, Metals.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

**Hazardous Polymerization**

Hazardous polymerization does not occur.

**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

**Sensitization**

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

**(h) STOT-single exposure;**

Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;**

Category 1

**Route of exposure**

Inhalation

**Target Organs**

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**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

**Persistence and Degradability****Persistence****Bioaccumulative Potential**

Readily biodegradable  
Soluble in water, Persistence is unlikely, based on information available.  
Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Benzoic acid	1.88	No data available

**Mobility**

The product is water soluble, and may spread in water systems. Is predicted to have low mobility in the environment: Highly mobile in soils

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant**

This product does not contain any known or suspected substance

**Ozone Depletion Potential**

This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

**Waste from Residues/Unused Products**

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

**Contaminated Packaging**

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

**Other Information**

Chemical wastes should be disposed through a licensed commercial waste collection service. 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

**ADG**

Not regulated

**IATA**

Not regulated

**Environmental hazards**

No hazards identified

**Special Precautions**

No special precautions required

**Additional information**

None known

## Section 15 - Regulatory Information

**Safety, health and environmental regulations/legislation specific for the substance or mixture****National Regulations**

Australia

See section 8 for national exposure control parameters.

**Standard for the Uniform Scheduling of Medicines and Poisons**

No poison schedule number allocated.

**Australian Industrial Chemicals Introduction Scheme (AICIS)**

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Benzoic acid - 65-85-0	Present	-

**Australian - Illicit Drug Precursors/Reagents Substance List**

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

**Chemicals of Security Concern**

This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

**National pollutant inventory** Not applicable

**Prohibition or notification/licensing requirements**

Shown below are details of specific prohibition/notifications or licensing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

**International Inventories**

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	ISHL	IECSC	KECL
Benzoic acid	X	X	200-618-2	-	X	X	-	X	X	X	X	KE-02696

**Legend:** X - Listed. '-' - Not Listed. **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**International Regulations**

**Ozone Depletion Potential** This product does not contain any known or suspected substance

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Rotterdam Convention (PIC)** Not applicable

**Basel convention on the control of transboundary movements of hazardous wastes and their disposal**

Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

Component	Basel Convention (Hazardous Waste)	Australian Hazardous Waste Act - Categories of Wastes to Be Controlled
Benzoic acid - 65-85-0	Annex I - Y34	Y34 solid or solution

Component	CAS No	OECD HPV	Restriction of Hazardous	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
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			Substances (RoHS)	Qualifying Quantities for Major Accident Notification	Qualifying Quantities for Safety Report Requirements
Benzoic acid	65-85-0	Listed	Not applicable	Not applicable	Not applicable

## Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Benzoic acid	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

## Section 16 - Other Information

## Legend

<b>AICS</b> - Australian Inventory of Chemical Substances	<b>NZIoC</b> - New Zealand Inventory of Chemicals
<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory	<b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
<b>DSL/NDL</b> - Canadian Domestic Substances List/Non-Domestic Substances List	<b>ENCS</b> - Japanese Existing and New Chemical Substances
<b>IECSC</b> - Chinese Inventory of Existing Chemical Substances	<b>KECL</b> - Korean Existing and Evaluated Chemical Substances
<b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances	<b>CAS</b> - Chemical Abstracts Service
<b>TWA</b> - Time Weighted Average	<b>ACGIH</b> - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)
<b>IARC</b> - International Agency for Research on Cancer	<b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code
<b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association	<b>ADG</b> Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships	<b>OECD</b> - Organisation for Economic Co-operation and Development
<b>NZS 5433:2012</b> - Transport of Dangerous Goods on Land	<b>LC50</b> - Lethal Concentration 50%
<b>LD50</b> - Lethal Dose 50%	<b>ATE</b> - Acute Toxicity Estimate
<b>EC50</b> - Effective Concentration 50%	<b>RPE</b> - Respiratory Protective Equipment
<b>WEL</b> - Workplace Exposure Limit	<b>NOEC</b> - No Observed Effect Concentration
<b>DNEL</b> - Derived No Effect Level	<b>BCF</b> - Bioconcentration factor
<b>POW</b> - Partition coefficient Octanol:Water	<b>PBT</b> - Persistent, Bioaccumulative, Toxic
<b>vPvB</b> - very Persistent, very Bioaccumulative	
<b>VOC</b> - (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

## Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

## Revision Date

21-Nov-2022

## Revision Summary

Not applicable.

**This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).**

## 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

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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**