

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: **4748**  
Version: **GHS 3.0 en**  
Replaces version of: 2021-11-16  
Version: (GHS 2)

date of compilation: 2016-01-14  
Revision: 2024-03-02

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Identification of the substance	<b>4-Hydroxybenzoic acid methyl ester</b> ROTICHROM® HPLC
Article number	4748
CAS number	99-76-3

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

Relevant identified uses:	Laboratory chemical Laboratory and analytical use
Uses advised against:	Do not use for private purposes (household). Food, drink and animal feedingstuffs.

### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0  
**Telefax:** +49 (0) 721 - 56 06 149  
**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)  
**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 Westmead, NSW	131126	

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification acc. to GHS

This substance does not meet the criteria for classification.

### 2.2 Label elements

#### Labelling

not required

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### Endocrine disrupting properties

The substance has an endocrine disrupting potential.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance	4-Hydroxybenzoic acid methyl ester
Molecular formula	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>
Molar mass	152.2 g/mol
CAS No	99-76-3

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes.

#### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Symptoms and effects are not known to date.

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

none

## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media



##### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!  
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

##### Unsuitable extinguishing media

water jet

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

Combustible.

##### Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures



##### For non-emergency personnel

Control of dust.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

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

##### Advice on how to contain a spill

Covering of drains. Take up mechanically.

##### Advice on how to clean up a spill

Take up mechanically.

##### Other information relating to spills and releases

Place in appropriate containers for disposal.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

No special measures are necessary.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

#### Ventilation requirements

Use local and general ventilation.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

#### 7.3 Specific end use(s)

No information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### National limit values

##### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [mg/m <sup>3</sup> ]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
AU	nuisance dusts		WES	10			i	WES

##### Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

i Inhalable fraction

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

##### Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	176.3 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	29.41 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### Environmental values

Relevant PNECs and other threshold levels				
End-point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	0.112 mg/l	aquatic organisms	water	intermittent release
PNEC	2.4 µg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0.24 µg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	63.2 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	6.32 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	11.5 µg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggles with side protection.

#### Skin protection



- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm

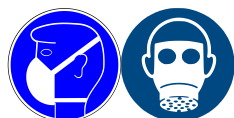
- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### Respiratory protection



# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	solid
Form	powder, crystalline
Colour	white
Odour	odourless
Melting point/freezing point	125 °C (ECHA)
Boiling point or initial boiling point and boiling range	270 – 280 °C at 1,013 hPa
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	>403 °C (ECHA) (relative self-ignition temperature for solids)
Decomposition temperature	>270 °C
pH (value)	7 (in aqueous solution: 1 g/l, 20 °C)
Kinematic viscosity	not relevant
<u>Solubility(ies)</u>	
Water solubility	1.88 g/l at 20 °C (ECHA)
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	1.98 (OECD-107)
Vapour pressure	0 hPa at 20 °C
<u>Density and/or relative density</u>	
Density	1.38 g/cm <sup>3</sup> at 20 °C (ECHA)
Relative vapour density	Information on this property is not available.
Bulk density	~ 600 – 900 kg/m <sup>3</sup>
Particle characteristics	No data available.

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### Other safety parameters

Oxidising properties none

### 9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics: There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser

### 10.4 Conditions to avoid

Keep away from heat. Decomposition takes place from temperatures above: >270 °C.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification acc. to GHS

This substance does not meet the criteria for classification.

#### Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4. May be harmful if swallowed.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	2,100 mg/kg	rat		ECHA

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

Data are not available.

- **If in eyes**

Data are not available.

- **If inhaled**

Data are not available.

- **If on skin**

Data are not available.

- **Other information**

Health effects are not known.

### 11.2 Endocrine disrupting properties

This substance is known as an "endocrine disruptor".

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	59.5 mg/l	fish	ECHA	96 h
ErC50	91 mg/l	algae	ECHA	72 h



# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

Aquatic toxicity (chronic)				
Endpoint	Value	Species	Source	Exposure time
EC50	0.89 mg/l	aquatic invertebrates	ECHA	21 d

### 12.2 Persistence and degradability

Theoretical Oxygen Demand: 1.788 mg/mg  
Theoretical Carbon Dioxide: 2.314 mg/mg

#### Biodegradation

The substance is readily biodegradable.

Process of degradability		
Process	Degradation rate	Time
biotic/abiotic	89 %	28 d
carbon dioxide generation	89 %	28 d

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	1.98 (OECD-107)
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### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

This substance is known as an "endocrine disruptor".

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

## SECTION 14: Transport information

### 14.1 UN number

<b>UN RTDG</b>	UN 3077
IMDG-Code	UN 3077
ICAO-TI	UN 3077

### 14.2 UN proper shipping name

<b>UN RTDG</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
ICAO-TI	Environmentally hazardous substance, solid, n.o.s.
Technical name	4-Hydroxybenzoic acid methyl ester

### 14.3 Transport hazard class(es)

<b>UN RTDG</b>	9
IMDG-Code	9
ICAO-TI	9

### 14.4 Packing group

<b>UN RTDG</b>	III
IMDG-Code	III
ICAO-TI	III

### 14.5 Environmental hazards

hazardous to the aquatic environment

### 14.6 Special precautions for user

There is no additional information.

### 14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Transport information National regulations Additional information (UN RTDG)

<b>UN number</b>	3077
<b>Class</b>	9
<b>Environmental hazards</b>	Yes Hazardous to the aquatic environment
<b>Packing group</b>	III
<b>Danger label(s)</b>	9 Fish and tree

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748



**Special provisions (SP)** 274, 331, 335, 375  
UN RTDG

**Excepted quantities (EQ)** E1  
UN RTDG

**Limited quantities (LQ)** 5 kg  
UN RTDG

**Emergency Action Code** 2Z

### International Maritime Dangerous Goods Code (IMDG) - Additional information

**Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

**Particulars in the shipper's declaration** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (4-Hydroxybenzoic acid methyl ester), 9, III

**Marine pollutant** YES (hazardous to the aquatic environment), (4-Hydroxybenzoic acid methyl ester)

**Danger label(s)** 9, "Fish and tree"



**Special provisions (SP)** 274, 335, 966, 967, 969

**Excepted quantities (EQ)** E1

**Limited quantities (LQ)** 5 kg

**EmS** F-A, S-F

**Stowage category** A

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

**Proper shipping name** Environmentally hazardous substance, solid, n.o.s.

**Particulars in the shipper's declaration** UN3077, Environmentally hazardous substance, solid, n.o.s., (4-Hydroxybenzoic acid methyl ester), 9, III

**Environmental hazards** YES (hazardous to the aquatic environment)

**Danger label(s)** 9, "Fish and tree"



**Special provisions (SP)** A97, A158, A179, A197, A215

**Excepted quantities (EQ)** E1

**Limited quantities (LQ)** 30 kg

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### SECTION 15: Regulatory information

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

There is no additional information.

##### National regulations(Australia)

##### Australian Inventory of Chemical Substances(AICS)

Substance is listed.

##### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

##### National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
JP	ISHA-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

##### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

#### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: 4748

### SECTION 16: Other information

#### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.8		Emergency Action Code: 2Z	yes
15.1		National inventories: change in the listing (table)	yes

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
STEL	Short-term exposure limit
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## 4-Hydroxybenzoic acid methyl ester ROTICHROM® HPLC

article number: **4748**

Abbr.	Descriptions of used abbreviations
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

### Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.