

**1 Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** D(+)-Melibiose monohydrate ≥99%, for biochemistry**Article number:** 4223**CAS Number:**

66009-10-7

**EC number:**

209-568-6

**Registration number**

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

No further relevant information available.

**Application of the substance / the preparation**

Laboratory chemical

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Carl Roth GmbH + Co. KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

E-Mail: [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)**Further information obtainable from:** Department Health, Safety and Environment**1.4 Emergency telephone number:**

Poison Centre Munich

Telefon +49/(0)89 19240

**2 Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008** Void**Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void**Information concerning particular hazards for human and environment:**

No hazardous product as specified in Directive 67/548/EEC.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**2.3 Other hazards**

All chemicals are potentially dangerous. They should only be handled by specially trained personnel.

**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

(Contd. on page 2)

**Trade name: D-(+)-Melibiose monohydrate ≥99%, for biochemistry**

(Contd. of page 1)

### 3 Composition/information on ingredients

#### 3.1 Chemical characterization: Substances

**CAS No. Description**

66009-10-7 D-(+)-Melibiose monohydrate

**Identification number(s)****EC number:** 209-568-6**Formula:** C<sub>12</sub>H<sub>22</sub>O<sub>11</sub> \* H<sub>2</sub>O**Molar mass [g/mol]:** 360,32

### 4 First aid measures



#### 4.1 Description of first aid measures

**General information:**

Remove any clothing soiled by the product.

**After inhalation:**

Supply fresh air; if there is any trouble seek medical help.

**After skin contact:**

Rinse with water

If skin irritation continues, consult a doctor.

**After eye contact:**

Rinse opened eye for 10 minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:**

Rinse out mouth and drink a glass of water. Do not induce vomiting.

If symptoms persist consult doctor.

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

No information available.

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

No further relevant information available.

### 5 Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:**

For this substance/mixture no limitations of extinguishing agents are given.

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

In the event of fire development of hazardous combustion gases or vapours possible.

In case of fire, the following can be released:

(Contd. on page 3)



**Trade name: D(+)-Melibiose monohydrate ≥99%, for biochemistry**

(Contd. of page 2)

Carbon monoxide and carbon dioxide

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

## 6 Accidental release measures

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

Ensure adequate ventilation  
Avoid formation of dust.  
Wear protective clothing.

**6.2 Environmental precautions**

Do not allow to enter sewers/ground water or penetrate the soil.

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

Pick up mechanically.  
Dispose of the material collected according to regulations.

**6.4 Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

**7.1 Precautions for safe handling**

Keep containers, equipment and working place clean.  
No special precautions are necessary if used correctly.  
Handling corresponding to laboratory safety guidelines.

**Information about fire - and explosion protection:**

No special measures required.

**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.

**Information about storage in one common storage facility:**

Store away from foodstuffs.

**Further information about storage conditions:**

None.

**7.3 Specific end use(s)**

No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical facilities:****8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:** Not required.

**Additional information:**

The lists valid during the making were used as basis.

(Contd. on page 4)

**Trade name: D(+)-Melibiose monohydrate ≥99%, for biochemistry**

(Contd. of page 3)

## 8.2 Exposure controls

### Personal protective equipment:

#### **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

#### **Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### **Respiratory protection:**



Required when dusts are generated: filter FFP1.

#### **Protection of hands:**



#### **Protective gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### **Material of gloves**

Nitrile, thickness: > 0.11 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

#### **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### **Eye protection:**



Tightly sealed goggles

#### **Body protection:**

Protective work clothing

(Contd. on page 5)



**Trade name: D(+)-Melibiose monohydrate ≥99%, for biochemistry**

(Contd. of page 4)

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

Form:	Crystalline powder
Colour:	white to yellowish
Odour:	Odourless
Odour threshold:	No information available.

**pH-value:** No information available.

#### Change in condition

Melting point/Melting range:	175 - 180 °C
Boiling point/Boiling range:	No information available.

**Flash point:** No information available

**Flammability (solid, gaseous):** Product is not flammable.

**Ignition temperature:** No information available

**Decomposition temperature:** No information available

**Self-igniting:** No information available

**Danger of explosion:** Product does not present an explosion hazard.

#### Explosion limits:

Lower:	No information available.
Upper:	No information available.

**Oxidizing properties:** No information available.

**Vapour pressure:** No information available

**Density:** No information available.

**Vapour density** No information available

**Evaporation rate** No information available

**Solubility in / Miscibility with water:**

Soluble.

**Partition coefficient (n-octanol/water):** No information available

#### Viscosity:

Dynamic:	No information available.
Kinematic:	No information available.

**9.2 Other information** No further relevant information available.

## 10 Stability and reactivity

### 10.1 Reactivity

No information available

### 10.2 Chemical stability

#### Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

### 10.3 Possibility of hazardous reactions

No information available.

### 10.4 Conditions to avoid

No information available.

(Contd. on page 6)

**Trade name: D(+)-Melibiose monohydrate ≥99%, for biochemistry**

(Contd. of page 5)

**10.5 Incompatible materials:**

Strong oxidizing agents.

**10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

In case of fire: see item 5.

**11 Toxicological information****11.1 Information on toxicological effects****Acute toxicity:**

LD/LC50 values relevant for classification: Quantitative data on the toxicity of this product are not available.

**Specific symptoms in biological assay:**

No information available.

**Primary irritant effect:****on the skin:**

No information available.

**on the eye:**

No information available.

**after inhalation:**

No information available.

**Sensitization:**

No sensitizing effects known.

**CMR effects:****Germ cell mutagenicity:**

No information available.

**Carcinogenicity:**

No information available.

**Reproductive toxicity:**

No information available.

**Aspiration hazard:**

No aspiration toxicity classification.

**Specific target organ toxicity - single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Specific target organ toxicity - repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**11.2 Further information:**

The product should be handled with the care usual when dealing with chemicals.

**Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

**12 Ecological information****12.1 Toxicity****Aquatic toxicity:**

Quantitative data on the ecological effect of this product are not available.

(Contd. on page 7)



**Trade name: D(+)-Melibiose monohydrate ≥99%, for biochemistry**

(Contd. of page 6)

**12.2 Persistence and degradability**

No further relevant information available.

**12.3 Bioaccumulative potential**

No further relevant information available.

**12.4 Mobility in soil**

No further relevant information available.

**Ecotoxicological effects:****Remark:**

Do not allow to enter waters, waste water, or soil!

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects**

No further relevant information available.

## 13 Disposal considerations

**13.1 Waste treatment methods****Recommendation**

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

**Uncleaned packaging:****Recommendation:**

Disposal according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

**14.1 UN-Number**

ADR, ADN, IMDG, IATA

Void

**14.2 UN proper shipping name**

ADR, ADN, IMDG, IATA

Void

**14.3 Transport hazard class(es)**

ADR, ADN, IMDG, IATA

Class

Void

**14.4 Packing group**

ADR, IMDG, IATA

Void

**14.5 Environmental hazards:****Marine pollutant:**

No

**14.6 Special precautions for user**

Not applicable.

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

(Contd. on page 8)

# Safety data sheet

## according to Regulation (EC) No. 1907/2006



Printing date 15.11.2012

Version number 2

Revision: 15.11.2012

**Trade name: D(+)-Melibiose monohydrate ≥99%, for biochemistry**

(Contd. of page 7)

**Transport/Additional information:**
**ADR**
**Remarks:**

Not subject to transport regulations.

**UN "Model Regulation":**

-

### 15 Regulatory information

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

**National regulations:**
**Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

**Waterhazard class:**

Generally not hazardous for water (German regulation).

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**
**Department issuing MSDS:** Department: Health, Safety and Environment

**Contact:** Herr Heine

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

 \* **Data compared to the previous version altered.**