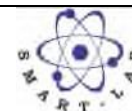


MATERIAL SAFETY DATA SHEET
According to regulation (EU) no.1907/2006

**MALTOSE**

Revision : 01

Date: August 10, 2022

MSDS Number : 119

Section 1 - Chemical Product and Company Identification

- 1.1 Product Name** : **MALTOSE MONOHYDRATE**
Synonyms : Maltobiose, 4-O- α -D-Glucopyranosyl-D-glucose
CAS No. : 6363-53-7
HS Code : 1702 90 10
Chemical Formula : $C_{12}H_{22}O_{11} \cdot H_2O$
Molecular Weight : 360.32 g/mol
Product Code : A-2190
Brand : SMART-LAB
- 1.2 Manufacturer** : **PT.Smart-Lab Indonesia**
Address : Ruko Boulevard Taman Tekno Blok E No. 9-11, BSD Serpong, Tangerang - Indonesia
Website : www.smartlabid.com
Email : sales@smartlabid.com
For information : Telp: +62 21- 7588 0205(Hunting), fax: +62-21-7588 0198
Emergency Telephone: +62-21-7588 0205(Hunting)
- 1.3 Application** : General Chemical reagent

Section 2 - Hazards Identification

- 2.1 Classification of the substance or mixture**
Classification according to Regulation (EC) No 1272/2008
 Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
- 2.2 Label elements**
 Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
- 2.3 Other hazards**
 This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

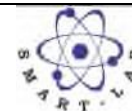
Section 3 - Composition, Information on Ingredients

- 3.1 Substances**
Synonyms : Maltobiose, 4-O- α -D-Glucopyranosyl-D-glucose
Formula : $C_{12}H_{22}O_{11} \cdot H_2O$
Molecular weight : 360.32 g/mol
CAS-No. : 6363-53-7
EC-No. : 200-716-5
Index-No. : -
- 3.2 Mixture**
 No components need to be disclosed according to the applicable regulations

Section 4 - First Aid Measures

- 4.1 Description of first aid measures**
If inhaled
 If breathed in, move person into fresh air. If not breathing, give artificial respiration.

MATERIAL SAFETY DATA SHEET
According to regulation (EU) no.1907/2006

**MALTOSE**

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MSDS Number : 119

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5 - Firefighting Measures

5.1 Extinguishing media**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary

5.4 Further information

No data available

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

6.2 Environmental precautions

No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling**Advice on protection against fire and explosion**

Provide appropriate exhaust ventilation at places where dust is formed.

MATERIAL SAFETY DATA SHEET
According to regulation (EU) no.1907/2006

**MALTOSE**

Revision : 01

Date: August 10, 2022

MSDS Number : 119

Hygiene measures

General industrial hygiene practice. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

Keep container tightly closed in a dry and well-ventilated place.
Store in cool place. Store at room temperature. Keep in a dry place.

Storage class

Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8 - Exposure Controls, Personal Protection

8.1 Control parameters**8.2 Exposure controls****Appropriat engineering controls**

General industrial hygiene practice.

Personal protective equipment**Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: Dermatril®

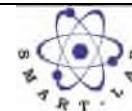
Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min Material tested: Dermatril®

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

MATERIAL SAFETY DATA SHEET
According to regulation (EU) no.1907/2006

**MALTOSE**

Revision : 01

Date: August 10, 2022

MSDS Number : 119

Respiratory protection

Respiratory protection is not required. Where protection from nuisance le (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

No special environmental precautions required

Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Form: powder
	Colour: white
Odour	No data available
Odour Threshold	No data available
pH	5.0 - 7 at 180 g/l at 25 °C
Melting point/freezingpoint	125,13 °C at 1.013,25 hPa - OECD Test Guideline 102
Initial boiling point and boiling range	196 °C - lit.
Flash point	> 113 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	The product is not flammable. - Flammability (solids)
Upper/lower flammability or explosive limits	No data available
Vapour pressure	0,0000188 hPa at 20 °C - OECD Test Guideline 104
Vapour density	No data available
Relative density	1,5181 g/cm ³ at 20 °C - OECD Test Guideline 109
Water solubility	470,2 g/l at 20 °C - OECD Test Guideline 105
Partition coefficient: octanol/water	log Pow: -5,03 at 25 °C - (calculated) – Bioaccumulation is not expected.
Auto-ignition temperature	No data available
Decomposition temperature	216,36 °C -
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	none

9.2 Other safety information

No data available

Section 10 - Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

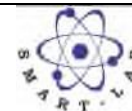
10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

MATERIAL SAFETY DATA SHEET
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10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

Section 11 - Toxicological Information

11.1 Information on toxicological effects**Acute toxicity**

LD50 Oral - Rat - 34.800 mg/kg

Remarks: (RTECS)

The value is given in analogy to the following substances: maltose

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: ARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available(Sucrose)

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

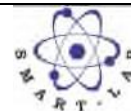
No data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Handle in accordance with good industrial hygiene and safety practice. Further data: Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately. Further toxicological data: Quantitative data on the toxicity of this product are not available

Section 12 - Ecological Information

MATERIAL SAFETY DATA SHEET
According to regulation (EU) no.1907/2006

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MSDS Number : 119

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

Section 13 - Disposal Considerations

13.1 Waste treatment methods**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user**Further information**

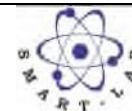
No data available

Section 15 - Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

MATERIAL SAFETY DATA SHEET
According to regulation (EU) no.1907/2006

**MALTOSE**

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15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

Section 16 - Additional Information

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 0

Reactivity: 0

Revision history :

Date	Rev	Description
June 07, 2018	00	-
August 10, 2022	01	thorough revision

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PT. Smartlab Indonesia shall not be held liable for any damage resulting from handling or from contact with the above product.