SAFETY DATA SHEET

according to Regulation (EC) No.1907/2006

Version 3.0 Revision Date 05.02.2016

Material Safety Data Sheet
Lactobionic acid msds

Section 1: Identification of the Substance/Preparation and of the Company/Undertaking

Identification of the substance or preparation

1.1 **Product identifiers**

Product Name : Lactobionic acid

Chemical Name : 4-O-beta-D-Galactopyranosyl-D-gluconic acid

CAS# : 96-82-2

EINECS# : 206-169-9

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, 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**

Identified uses : Buffering; manufacturer of substances

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

Company : M.C.Biotec Inc.
47-505, Demin Huayuan
Nantong, China

Tel : +86-139-13923033

Fax : +86-10-80115555 ext 441505

E-mail address : mc@mcbiotec.com

website : www.mcbiotec.com

1.4 **Emergency telephone number**

Emergency Phone # : +86-139-13923033

Section 2: Hazards Identification

2.1 **Classification of the substance or mixture**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008..

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2 **Label elements**

The product does not need to be labeled in accordance with EC directives or respective national laws.

Pictogram	none
Signal word	none
Hazard statement(s)	none
Precautionary statement(s)	none
Supplemental Hazard Statements	none

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 and Information on Ingredients

INCI Name : Lactobionic acid

Synonyms : 4-O-β-D-Galactopyranosyl-D-gluconic acid

Formula : $C_{12}H_{22}O_{12}$

Molecular Weight : 358.3g/mol

CAS-No.	EC-No.	Concentration (%)
Lactobionic acid		
96-82-2	206-169-9	100

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.

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: Fire Fighting 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 fire fighting if necessary.

5.4 **Further information**

no data available

Section 6: Accidental Release Measures

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Avoid breathing dust.

6.2 **Environmental precautions**

Do not let product enter drains.

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

Pick up and arrange disposal without creating dust. 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

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end uses

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**

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 **Exposure controls**

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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.

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.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (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

Do not let product enter drains.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a)	**Appearance**	**Form:** crystalline **Colour:** White
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 113-118℃
f)	Initial boiling point and boiling range	No data available
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

No data available

Section 10: Stability and Reactivity

10.1 **Reactivity**

no data available

10.2 **Chemical stability**

no data available

10.3 **Possibility of hazardous reactions**

no data available

10.4 **Conditions to avoid**

no data available

10.5 **Incompatible materials**

Strong oxidizing agents

10.6 **Hazardous decomposition products**

Other decomposition products - no data available

In the event of fire: see section 5

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - > 5000 mg/kg

LD50 Dermal-rat- > 2000 mg/kg

Skin corrosion/irritation

Skin - rabbit - Mild skin irritation - 4 h

Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

Genotoxicity in vitro - Not mutagenic in Ames Test.

Histidine reversion (Ames)

Carcinogenicity

IARC: 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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Additional Information

RTECS: not available

Section 12: Ecological Information

12.1 Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 82 % - Readily biodegradable.

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

no data available

Section 13: Disposal Considerations

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

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

No data available

Section 15: Regulatory Information

EINECS: This product is on the European Inventory of Existing commercial Chemical Substances.

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

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

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

Other Special Considerations: Not available.

Disclaimer

The information above is based on our present knowledge. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. Users should make their own investigations to determine the suitability of the information for their particular purposes.