1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name	:	Sodium gluconate
Substance name	:	Sodium gluconate
Molecular formula	:	C6-H11-O7-Na
Chemical identity	:	Sodium pentahydroxy capronate
CAS-No.	:	527-07-1
EC-No.	:	208-407-7

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

Use of the Substance/Mixture	:	Food additive, Cosmetic additive, Medical aids, Industrial use

1.3 Details of the supplier of the safety data sheet

Company	:	Jungbunzlauer S.A. Z.I. Portuaire BP 32 67390 Marckolsheim France www.jungbunzlauer.com
Telephone	:	+33 388 582-929
Telefax	:	+33 388 582-941
E-mail address	:	msds@jungbunzlauer.com

1.4 Emergency telephone number

Telephone	:	+33 388 582-929

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

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

Classification (67/548/EEC, 1999/45/EC)

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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

2.3 Other hazards

Additional advice:
According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

3. Composition/information on ingredients

3.1 Substances

Substance name	CAS-No.	Concentration [%]
No dangerous ingredients according to Regulation (EC) No. 1907/2006 :		
Sodium gluconate	527-07-1	100

3.2 Mixtures

4. First aid measures

4.1 Description of first aid measures

General advice : Get medical advice/ attention if you feel unwell.
Show this safety data sheet to the doctor in attendance.

If inhaled : If breathed in, move person into fresh air.

In case of skin contact : Wash off with soap and plenty of water.

In case of eye contact : Remove contact lenses.
Flush eyes with water as a precaution.

If swallowed : Drink water as a precaution.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water
Water spray
Dry chemical
Foam
Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.
Hazardous decomposition products formed under fire conditions.
Exposure to decomposition products may be a hazard to

health.

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	Wear self contained breathing apparatus for fire fighting if necessary. Use personal protective equipment.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation, especially in confined areas.

6.2 Environmental precautions

Environmental precautions	:	Prevent further leakage or spillage if safe to do so. No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water.

6.4 Reference to other sections

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid creating dust. Do not breathe dust.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Dust explosion class	:	St1

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container.
Advice on common storage	:	No special restrictions on storage with other products.
Other data	:	No decomposition if stored and applied as directed.

7.3 Specific end uses

8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Provide adequate ventilation.

Personal protective equipment

Respiratory protection	:	In the case of dust or aerosol formation use respirator with an approved filter. Half mask with a particle filter P2 (EN 143).
Hand protection	:	Rubber or plastic gloves Break through time: < 480 min
Eye protection	:	Safety glasses
Skin and body protection	:	Lightweight protective clothing
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. General industrial hygiene practice. Do not breathe dust. Avoid contact with skin, eyes and clothing.

Environmental exposure controls

General advice	:	Prevent further leakage or spillage if safe to do so. No special environmental precautions required.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	granular Crystalline powder
Colour	:	white off-white
Odour	:	slight none
Flash point	:	not applicable
Autoignition temperature	:	> 200 °C
Molecular Weight	:	218,14 g/mol

pH	:	6,5 - 7,5 at 10 % (as aqueous solution)
Melting point/range	:	Decomposes before melting.
Bulk density	:	600 - 1.000 kg/m3
Water solubility	:	ca. 590 g/l at 25 °C
Partition coefficient: n-octanol/water	:	log Pow: -5,99 Calculation
Solubility in other solvents	:	at 20 °C Medium: Alcohol slightly soluble

9.2 Other information

10. Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : None known.

10.4 Conditions to avoid

Conditions to avoid : Protect from moisture.

10.5 Incompatible materials

Materials to avoid : not applicable

10.6 Hazardous decomposition products

Hazardous decomposition products : No decomposition if stored normally.
Thermal decomposition can lead to release of irritating gases and vapours.

Thermal decomposition : 170 - 220 °C

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity
Sodium gluconate : LD50: 6.060 mg/kg
Species: rat
Method: OECD Test Guideline 401
Test substance: Potassium Gluconate

Acute dermal toxicity
Sodium gluconate : LD50: > 2.000 mg/kg
Species: rat
Method: OECD Test Guideline 402
Test substance: Gluconic Acid

Acute toxicity (other routes of administration)
Sodium gluconate : LD0: ca. 7.630 mg/kg
Application Route: i.v.
Species: rabbit
Test substance: Sodium gluconate

Skin corrosion/irritation

Skin irritation
Sodium gluconate : Species: rabbit
Result: No skin irritation
Method: OECD Test Guideline 404
Test substance: Gluconic Acid

Serious eye damage/eye irritation

Eye irritation
Sodium gluconate : Species: rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
Test substance: Gluconic Acid

Respiratory or skin sensitization

Sensitisation
Sodium gluconate : Species: mouse
Result: Did not cause sensitization on laboratory animals.
Method: OECD Test Guideline 429
Test substance: Gluconic Acid

Germ cell mutagenicity

Assessment
Sodium gluconate : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Assessment

Sodium gluconate : Did not show carcinogenic or teratogenic effects in animal experiments.

Reproductive toxicity

Assessment
Sodium gluconate : No toxicity to reproduction

Target Organ Systemic Toxicant - Repeated exposure

Sodium gluconate : Species: rat
Application Route: Oral
Lowest observable effect level: 250 mg/kg
Test substance: Glucono-delta-lactone
Method: OECD Test Guideline 408

12. Ecological information

12.1 Toxicity

Toxicity to fish
Sodium gluconate : NOEC: = 100 mg/l
Exposure time: 96 h
Species: Oryzias latipes (Orange-red killifish)
semi-static test
Test substance: Sodium gluconate
Method: OECD Test Guideline 203

LC50: > 100 mg/l
Exposure time: 96 h
Species: Oryzias latipes (Orange-red killifish)
semi-static test
Test substance: Sodium gluconate
Method: OECD Test Guideline 203

LC50: 360 mg/l
Exposure time: 48 h
Species: Fish
Test substance: Glucono-delta-lactone
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates.
Sodium gluconate : EC50: > 1.000 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test
Test substance: Sodium gluconate
Method: OECD Test Guideline 202

Toxicity to algae
Sodium gluconate : EC0: <= 100 mg/l
Exposure time: 72 h

Species: Desmodesmus subspicatus (green algae)
static test
Test substance: Sodium gluconate
Method: OECD Test Guideline 201

Toxicity to bacteria
Sodium gluconate : NOEC: 100 mg/l
Exposure time: 3 h
Respiration inhibition of activated sludge
Test substance: Glucono-delta-lactone
Method: OECD Test Guideline 209

EC50: 649,8 mg/l
Exposure time: 3 h
Respiration inhibition of activated sludge
Test substance: Glucono-delta-lactone
Method: OECD Test Guideline 209

12.2 Persistence and degradability

Biodegradability
Sodium gluconate : Zahn-Wellens Test
Result: Inherently biodegradable
Exposure time: 3 d
Test substance: Sodium gluconate
Method: OECD Test Guideline 302

Result: Readily biodegradable.
Exposure time: 28 d
Test substance: Sodium gluconate
Method: OECD Test Guideline 301D

anaerobic
Result: 100% anaerobically biodegradable
Exposure time: 35 d
Test substance: Sodium gluconate
Method: OECD Test Guideline 311

Biochemical Oxygen Demand (BOD) : 507 mg/g

Chemical Oxygen Demand (COD) : 807 mg/g

12.3 Bioaccumulative potential

Bioaccumulation : The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other adverse effects

Additional ecological information	:	Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

13. Disposal considerations

13.1 Waste treatment methods

Product	:	Where possible recycling is preferred to disposal or incineration. Can be landfilled or incinerated, when in compliance with local regulations. Waste codes should be assigned by the user based on the application for which the product was used. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Special precautions for user :

Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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

Major Accident Hazard Legislation	:	96/82/EC Update: 2003 Directive 96/82/EC does not apply

15.2 Chemical Safety Assessment

16. Other information

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 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.

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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As of January 2015 , document has been reviewed and remains current until next manufacturer scheduled update

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