

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## Sodium gluconate

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

#### 1.1 Product identifier

Trade name : Sodium gluconate  
Substance name : Sodium gluconate  
Product name : Natriumgluconat  
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 Sub- : Food additive, Cosmetic additive, Medical aids, Industrial use  
stance/Mixture  
Recommended restrictions : None known.  
on use

### SECTION 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.

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### 2.2 Label elements

#### Labeling (REGULATION (EC) No 1272/2008)

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

### 2.3 Other hazards

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.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical nature : Solid

Chemical name	CAS-No. EC-No.	Concentration (%)
No dangerous ingredients according to Regulation (EC) No. 1907/2006:		
Sodium gluconate	527-07-1 208-407-7	100

## SECTION 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 the 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

Symptoms : No information available.

Risks : None known.

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

Treatment : Treat symptomatically.

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Water  
Water spray  
Dry  
chemical  
Foam  
Carbon dioxide (CO<sub>2</sub>)

#### 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 firefighters : Wear self-contained breathing apparatus for firefighting 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.

### SECTION 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 material for containment and cleaning up

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

#### 6.4 Reference to other sections

For personal protection see section 8.  
For disposal considerations see section 13.

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### SECTION 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.
- 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.
- 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 the original container.
- Advice on common storage : No special restrictions on storage with other products.
- Other data : No decomposition if stores and applied as directed.

#### 7.3 Specific end use(s)

- Specific use(s) : none

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Contains no substances with national occupational exposure limit values.

#### 8.2 Exposure controls

##### Engineering measures

Provide adequate ventilation.

##### Personal protective equipment

- Eye protection : Safety glasses
- Hand protection
- Material : Rubber or plastic gloves
- Break through time : <480 min
- Skin and body protection : Lightweight protective clothing
- 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)

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### SECTION 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
Odour Threshold	: Not relevant
pH	: 6,5 - 7,5, 10 %(as aqueous solution)
Melting point/range	: Decomposes before melting. : No data available
Flash point	: Not applicable
Evaporation rate	: Not applicable
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: Not applicable
Vapour density	: Not applicable
Relative density	: No data available
Bulk density	: 600 - 1.000 kg/m <sup>3</sup>
Water solubility	: ca. 590 g/l (25 °C)
Solubility in other solvents	: Solvent: Alcohol slightly soluble (20 °C) Description: slightly soluble
Partition coefficient: n-octanol/water	: log Pow: -5,99 Calculation
Auto-ignition temperature	: > 200 °C
Thermal decomposition	: 170 - 220 °C
Viscosity, dynamic	: Not applicable
Explosive properties	: Dust can form an explosive mixture in air.
Oxidizing properties	: Not applicable

#### 9.2 Other information

Molecular weight	: 218,14 g/mol
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### SECTION 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 : Oxidizing agents

#### 10.6 Hazardous decomposition products

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

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological

##### effects

##### Acute toxicity

##### Components:

##### Sodium gluconate:

Acute oral toxicity : LD50 Rat, male and female: 6.060 mg/kg  
Method: OECD Test Guideline 401  
Test substance: Potassium Gluconate

Acute dermal toxicity : LD50 Rat, male and female: > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Test substance: Gluconic Acid  
GLP: yes

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

##### Skin corrosion/irritation

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### Components:

#### Sodium gluconate:

: Species: Rabbit  
Result: No skin irritation  
Method: OECD Test Guideline 404  
GLP: yes  
Test substance:Gluconic Acid

### Serious eye damage/eye irritation

#### Components:

#### Sodium gluconate:

: Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405  
GLP: yes  
Test substance: Gluconic Acid

### Respiratory or skin sensitisation

#### Components:

#### Sodium gluconate:

: Species: Mouse  
Result: Did not cause sensitisation on laboratory animals.  
Method: OECD Test Guideline 429  
GLP: yes  
Test substance: Gluconic Acid

### Germ cell mutagenicity

#### Components:

#### Sodium gluconate:

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects

### Carcinogenicity

#### Components:

#### Sodium gluconate:

Carcinogenicity - Assessment : Did not show carcinogenic or teratogenic effects in animal experiments.

### Reproductive toxicity

#### Components:

#### Sodium gluconate:

Reproductive toxicity- Assessment : No toxicity to reproduction

STOT - single exposure : No data available

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### STOT - repeated exposure

No data available

### Repeated dose toxicity

#### Components:

#### Sodium gluconate:

: Rat:  
LOAEL: 250 mg/kg  
Application Route: Oral  
Method: OECD Test Guideline 408  
Test Substance: Glucono-delta-lactone

### Aspiration hazard

No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

#### Sodium gluconate:

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

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

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

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

Toxicity to algae : EC0 (*Desmodesmus subspicatus* (green algae)): <= 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Sodium gluconate  
Method: OECD Test Guideline 201



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

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

### 12.2 Persistence and degradability

#### Components:

#### **Sodium gluconate:**

Biodegradability : Test Type: Zahn-Wellens Test  
Inoculum: activated sludge  
Result: Inherently biodegradable  
Exposure time: 3 d  
Kinetic:  
: 98,3 %  
Method: OECD Test Guideline 302  
Test substance: Sodium gluconate

Result: Readily biodegradable.  
Exposure time: 28 d  
Kinetic:  
: 89 %  
Method: OECD Test Guideline 301D  
Test substance: Sodium gluconate

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

Biochemical Oxygen Demand (BOD) : 507 mg/g

Chemical Oxygen Demand (COD) : 807 mg/g

### 12.3 Bioaccumulative potential

#### Product:

**Partition coefficient:** : log Pow: -5,99 Calculation  
noctanol/water

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### Components:

#### **Sodium gluconate:**

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

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

#### Components:

#### **Sodium gluconate:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

### 12.6 Other adverse effects

#### Product:

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

## SECTION 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.

## SECTION 14: Transport information

### 14.1 UN number

ADR : Not dangerous goods  
RID : Not dangerous goods  
IMDG : Not dangerous goods  
IATA : Not dangerous goods

### 14.2 Proper shipping name

ADR : Not dangerous goods  
RID : Not dangerous goods  
IMDG : Not dangerous goods  
IATA : Not dangerous goods

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### 14.3 Transport hazard class

ADR : Not dangerous goods  
RID : Not dangerous goods  
IMDG : Not dangerous goods  
IATA : Not dangerous goods

### 14.4 Packing group

ADR : Not dangerous goods  
RID : Not dangerous goods  
IMDG : Not dangerous goods  
IATA : Not dangerous goods

### 14.5 Environmental hazards

ADR : Not dangerous goods  
RID : Not dangerous goods  
IMDG : Not dangerous goods  
IATA : Not dangerous goods

### 14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.

Not applicable for product as supplied

## SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

#### The components of this product are reported in the following inventories:

EINECS : On the inventory, or in compliance with the inventory  
TSCA : On TSCA Inventory  
AICS : On the inventory, or in compliance with the inventory  
DSL : All components of this product are on the Canadian DSL  
NZIoC : On the inventory, or in compliance with the inventory  
KECI : On the inventory, or in compliance with the inventory  
ENCS : On the inventory, or in compliance with the inventory  
PICCS : On the inventory, or in compliance with the inventory  
IECSC : On the inventory, or in compliance with the inventory  
REACH : This substance is exempt from registration according to Regulation (EC) No. 1907/2006 (REACH).

### 15.2 Chemical safety assessment

none

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### **SECTION 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.