

SODIUM GLUCONATE

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

SODIUM GLUCONATE
Sodium salt of gluconic acid; Sodium 2,3,4,5,6-pentahydroxy-hexanoate
CAS: 527-07-1

Other means of identification:

EC No.: 208-407-7 | INCI Name: Sodium Gluconate | Food additive: E576

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Chelating/sequestering agent in food processing, cleaning formulations and detergents, electroplating and metal surface treatment, concrete admixtures (set retarder), water treatment. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS: This product has no classification under CLP/GHS based on available data. It is not identified as a PBT or vPvB substance.

2.2 GHS label elements, including precautionary statements:

No hazard pictograms, signal word, hazard statements or precautionary statements are required for this product under GHS.

2.3 Other hazards which do not result in classification:

Dust may cause mechanical irritation to eyes, skin and respiratory tract; this is not a classifying effect. This product is not identified as a PBT substance.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Sodium Gluconate

Identification	Chemical Name / Classification	Concentration
CAS: 527-07-1 EC: 208-407-7	Sodium Gluconate – Not classified	100%

To obtain more information on the hazards of the substance, consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

By inhalation:

If adverse effects occur, remove to fresh air and get medical attention.

By skin contact:

Wash thoroughly with soap and water.

By eye contact:

Flush immediately with water or physiological saline for at least 15 minutes. Get prompt medical attention.

By ingestion:

Get medical attention if adverse effects occur.

4.2 Most important symptoms/effects, acute and delayed:

Skin: May cause irritation and redness for susceptible individuals. Eyes: May cause mild irritation; eyes may water profusely. Ingestion: May cause irritation if large amounts are swallowed – nausea, stomach pain, vomiting and diarrhoea may occur. Inhalation: May cause respiratory irritation in susceptible individuals – shortness of breath, sneezing and coughing. Long-term inhalation of excessive dust may cause delayed lung injury.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Eye wash stations should be available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water, carbon dioxide, foam, dry chemical.
Unsuitable: None known.

5.2 Specific hazards arising from the chemical:

In combustion, emits toxic fumes of carbon dioxide/carbon monoxide. Dust dispersed in air in sufficient concentration can be a dust explosion hazard.

5.3 Special protective actions for fire-fighters:

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Wear suitable protective clothing (see section 8). Do not create dust.

6.2 Environmental precautions:

Do not discharge into drains or rivers.

6.3 Methods and materials for containment and cleaning up:

Collect as much as possible for use or disposal in a properly labeled container. Flush remainder into normal drainage with copious amounts of water.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

Wear suitable protective clothing. Ensure sufficient ventilation in the work area. Avoid generating dust.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area. Keep away from direct sunlight. Avoid contact with water and humidity. Suitable packaging: paper, plastic or poly-lined bags or drums.

7.3 Specific end use(s):

No special requirement beyond the uses specified in section 1.2.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Identification	Occupational Exposure Limit Type	Value
Sodium Gluconate CAS: 527-07-1	Respirable dust, 8-hour TWA (UK WEL reference)	4 mg/m³
	Respirable dust, 8-hour TWA (US OSHA reference)	5 mg/m³

No exposure levels are established specifically for this product in India; total inhalable dust (8-hour TWA) of 15 mg/m³ is a commonly referenced general nuisance-dust benchmark.

8.2 Appropriate engineering controls:

Provide sufficient ventilation of the work area to keep airborne dust concentrations low.

B. Respiratory protection:

Respirator with particle filter if dust levels are excessive.

C. Specific protection for the hands:

Protective gloves.

D. Eye and face protection:

Safety goggles; provide eye wash stations.

E. Bodily protection:

Protective clothing; provide safety shower.

Environmental exposure controls:

No special requirement under normal use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Granular powder
Color	White to tan
Odor	Odorless
Volatility	
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Vapour pressure at 25°C	7.23 x 10 ⁻¹⁸ mmHg (1 x 10 ⁻¹⁸ kPa)
Vapour density	Unknown
Product Description	
Relative density	945 kg/m³ (granular grade); 705 kg/m³ (powder grade)
pH	6.8 – 7.2 (10% aqueous solution)
Solubility in water at 25°C	Highly soluble, 5.9 x 10 ⁵ mg/L
Melting point/range	192 – 202°C
Decomposition temperature	> 210°C
Flammability	
Flammability (solid)	Not applicable
Auto-ignition temperature	Not applicable
Upper / Lower flammability limit	Not applicable
Other	
Viscosity	Not applicable
Molecular weight	218.13 g/mol

9.2 Other information:

Oxidising properties	Non-oxidising
Explosive properties	Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Stable under recommended transport and storage conditions.

10.2 Chemical stability:

Stable under normal conditions.

10.3 Possibility of hazardous reactions:

Hazardous reactions are not expected to occur under normal conditions.

10.4 Conditions to avoid:

Direct Sunlight	Moist Air	Humidity
Avoid prolonged exposure	Avoid	Avoid contact

10.5 Incompatible materials:

Strong oxidizers.

10.6 Hazardous decomposition products:

In combustion, emits toxic fumes of carbon dioxide/carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

A. Ingestion (acute effect):

May cause irritation if large amounts are swallowed. Nausea and stomach pain may occur, with possible vomiting and diarrhoea.

B. Inhalation (acute effect):

May cause respiratory irritation in susceptible individuals; shortness of breath, sneezing and coughing.

C. Contact with skin and eyes (acute effect):

Skin: may cause irritation and redness for susceptible individuals. Eyes: may cause mild irritation; eyes may water profusely.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Carcinogenicity, mutagenicity, teratogenicity and reproductive toxicity: Not applicable/no data indicating a hazard.

E. Delayed/chronic effects:

Long-term inhalation of excessive dust may cause delayed lung injury.

Product-specific toxicological information:

Identification	Acute Toxicity	Species
Sodium Gluconate CAS: 527-07-1	LD50 oral: > 2000 mg/kg	Rat
	LD50 intravenous: 7630 mg/kg	Rabbit

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Species	Test	Value
Fish	96h LC50	> 1000.0 mg/L
Daphnid	48h LC50	> 1000.0 mg/L
Green Algae	96h EC50	> 1000.0 mg/L
Fish	Chronic Value	> 100.0 mg/L
Daphnid	Chronic Value	> 100.0 mg/L
Algae	Chronic Value	> 100.0 mg/L
Bacteria	EC50	> 5000.0 mg/L

12.2 Persistence and degradability:

Readily and rapidly biodegradable.

12.3 Bioaccumulative potential:

Does not bioaccumulate.

12.4 Mobility in soil:

Soluble in water; mobile.

12.5 Results of PBT and vPvB assessment:

Not identified as a PBT substance.

12.6 Other adverse effects:

Not expected to cause significant environmental impact.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

In accordance with applicable regulations; dilute residues can normally be flushed into normal drainage/sewers where locally permitted. Contaminated containers must not be treated as household waste – recycle via a licensed contractor where practical.

Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Not assigned – not dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	None; physico-chemical properties see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG):

14.1 UN number	Not assigned – not dangerous goods
14.2 UN proper shipping name	Non-applicable

14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Marine pollutant	No
14.6 Special precautions for user	None
14.7 Transport in bulk	Not relevant

Transport of dangerous goods by air (IATA/CAO):

14.1 UN number	Not assigned – not dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	None
14.7 Transport in bulk	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

Sodium gluconate is permitted for use as a food additive (E576) under applicable Indian (FSSAI) and international (Codex Alimentarius) food regulations, subject to the specific product grade and application. Consult Suraj Chemicals for grade-specific documentation.

Other legislation:

The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 – Non-applicable (not classified as hazardous)

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

Not applicable – this product is not classified as hazardous under GHS.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, to facilitate comprehension of this safety data sheet and the product label.

Principal bibliographical sources:

Manufacturer's Safety Data Sheet (REACH Regulation (EC) No 1907/2006 – No 453/2010 format); publicly documented GHS classification data for CAS 527-07-1.

Abbreviations and acronyms:

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals | CLP: Classification, Labelling and Packaging Regulation | PBT: Persistent, Bioaccumulative and Toxic | vPvB: very Persistent, very Bioaccumulative | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET