SAFETY DATA SHEET

REFINED SALT (SODIUM CHLORIDE)

CAS No.: 7647-14-5

This Safety Data Sheet is issued by Suraj Chemicals as the distributor/supplier of record, based on manufacturer and published GHS / regulatory reference data for this substance. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

GHS Product identifier

REFINED SALT (SODIUM CHLORIDE)
Common Salt
CAS: 7647-14-5

Other means of identification

Not relevant

Recommended use of the chemical and restrictions on use

Relevant uses: Industrial and process salt for water softening (brine regeneration), chemical feedstock, general industrial use. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

Supplier's details

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS:
Sodium chloride is a well-established, non-hazardous industrial salt. Per standard, publicly documented GHS classification, sodium chloride is **Not classified** as hazardous. (The manufacturer's source SDS displays a generic GHS07 pictogram/Danger signal word template but leaves the hazard/precautionary statement fields blank, with the accompanying label text stating "Not classified as hazardous to users" – consistent with the standard public classification used here.)

Not classified	Not classified as hazardous to users

GHS label elements, including precautionary statements

GHS: Not classified – no signal word required

Hazard statements

None assigned. (Concentrated solutions/dust may cause transient eye irritation – see section 11.)

Precautionary statements

P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/eye protection where dust is generated.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards which do not result in classification

Ingestion of large quantities (well above normal dietary/process handling) can cause fatal disturbance of body electrolyte and fluid balance, particularly in the young and elderly – not a classification-relevant hazard under normal industrial handling.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical description: Sodium Chloride (NaCl), crystalline solid

In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 7647-14-5	Sodium Chloride – Not classified	100%

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

Mixtures

Non-applicable

4. FIRST AID MEASURES

Description of necessary first-aid measures

Request medical assistance if symptoms develop, showing the SDS of this product.

By inhalation

Remove patient to fresh air. Keep warm and at rest. Give drinks if desired.

By skin contact

Wash with plenty of water.

By eye contact

Irrigate with eyewash solution or water. If symptoms develop, obtain medical help.

By ingestion/aspiration

Vomiting will probably occur provided the patient is conscious. Give plenty of liquid to drink. Obtain immediate medical attention especially if vomiting has not occurred. Do not use salt as an emetic to induce vomiting.

Most important symptoms/effects, acute and delayed	Eye contact: not toxic to the eye, but concentrations much above that of tears cause a stinging sensation. Inhalation: very high concentrations of salt dust may cause inflammation of the respiratory mucous membranes. Skin contact: dry salt and concentrated solutions can withdraw fluid from skin and, on prolonged contact, cause irritation. Ingestion: excessive amounts of salt or brine can cause inflammatory reactions in the gastrointestinal tract (vomiting, diarrhea) and, in extreme cases, convulsions and collapse; the young and elderly are especially sensitive.
Indication of immediate medical attention and special treatment needed, if necessary	Not relevant under normal industrial handling conditions.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	**Suitable:** Use agents suitable for the type of surrounding fire (dry chemical, CO2, water spray or foam). **Unsuitable:** None known – product is non-flammable.
Specific hazards arising from the chemical	Non-flammable. No hazardous decomposition known under fire conditions.
Special protective actions for fire-fighters	In the event of a fire involving other materials, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive-pressure mode. **Additional provisions** Non-flammable; no unusual fire hazard from this product itself.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	**For non-emergency personnel** Avoid prolonged skin contact and inhalation of dust; otherwise normal good handling and housekeeping practice is adequate. No special protective clothing is required. An eyewash bottle with clean water should be available. **For emergency responders** Ventilate area of leak or spill. Wear appropriate PPE as specified in Section 8.
Environmental precautions	No special environmental precautions required under normal spill conditions.
Methods and materials for containment and cleaning up	Spillages should be swept up or may be safely water-hosed to drain under normal circumstances. Sweep up and containerize for reclamation or disposal; vacuuming or wet sweeping may be used to avoid dust dispersal. Small amounts of residue may be flushed to sewer with plenty of water.
Reference to other sections	See section 8.

7. HANDLING AND STORAGE

Precautions for safe handling

A. General precautions for safe use
Salt dust is non-flammable, but static electricity can be generated by pneumatic conveying; pipes should be bonded and earthed, especially in environments where a spark could prove hazardous.

B. Technical recommendations for the prevention of fires and explosions
Keep away from heat, sparks and open flame as a general precaution; no smoking inside the storage area.

C. Technical recommendations on general occupational hygiene
Ventilate area of leak or spill; wear appropriate PPE per section 8.

D. Technical recommendations to prevent environmental risks
No special environmental risk-prevention measures required for this product.

Conditions for safe storage, including any incompatibilities

A. Specific storage requirements

Storage condition	Cool, dry area away from heat, sparks and open flame
Incompatibilities	None

B. General conditions for storage
Comply with all legal requirements for storage and handling. Proper earthing/bonding to avoid static discharge during pneumatic conveying.

Specific end use(s)

Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Identification	Occupational Exposure Limit Type	Value
Sodium Chloride CAS: 7647-14-5	TLV-TWA / TLV-STEL	Not established

Appropriate engineering controls

In general, dilution ventilation is a satisfactory health hazard control for this substance. If conditions of use create discomfort to the worker, a local exhaust system should be considered.

B. Respiratory protection
If the process generates salt dust, a disposable face mask should be worn.

C. Specific protection for the hands
Gloves recommended where prolonged contact may cause skin dryness.

D. Eye and face protection
Wear chemical safety goggles in situations where contact with the eyes may occur.

E. Bodily protection
Standard work clothing; skin should be washed to remove salt after contact.

F. Additional emergency measures
Eyewash facilities recommended in areas where dust is generated.

Environmental exposure controls
None specific.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state at 20°C	Solid
Appearance	Colorless transparent crystals / white crystalline powder solid
Odor	Odorless
Odour threshold	Not applicable
Volatility	
Boiling point at 760 mm Hg	1413°C
Vapour pressure at 20°C	2.4 mm Hg at 747°C
Evaporation rate	Not applicable
Product Description	
Molecular weight	58.44 g/mol
Specific gravity	No data available
pH	~10.0 (10% aqueous solution)
Vapour density	No data available
Partition coefficient n-octanol/water	No data available
Solubility in water at 20°C	35.7 g/100g (0°C) – 39.8 g/100g (100°C)
Decomposition temperature	Not applicable (contains no water of crystallisation)
Melting point/freezing point	801°C
Flammability	
Flash Point	Not pertinent
Flammability (solid, gas)	Non-flammable
Autoignition temperature	Not pertinent
Lower / Upper flammability limit	Not pertinent

Other information

Explosive properties	Not applicable
Oxidising properties	Not applicable
Corrosive to metals	Under wet conditions can corrode common metals (iron, aluminium, zinc); stainless steel and Monel resist attack

10. STABILITY AND REACTIVITY

Reactivity
Reacts with strong sulfuric acid or nitric acid to give hydrogen chloride gas.

Chemical stability
Stable under normal conditions.

Possibility of hazardous reactions
Trace amounts of hydrogen chloride gas may be evolved at temperatures in excess of 800°C.

Conditions to avoid

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Avoid temperatures in excess of 800°C	Not applicable	Wet conditions promote metal corrosion

Incompatible materials
Strong sulfuric or nitric acid (liberates HCl gas). Under wet conditions, corrodes iron, aluminium and zinc. Does not react with alkalis at ordinary temperatures.

Hazardous decomposition products
No hazardous decomposition known under normal conditions; trace hydrogen chloride gas above 800°C.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Routes of exposure: ingestion, eyes, inhalation, skin absorption. In case of exposure that is repetitive, prolonged, or at concentrations higher than the recommended occupational exposure limits, adverse health effects may result depending on the means of exposure:

A. Ingestion (acute effect)
LD50 (oral, rat): 3000 mg/kg. High concentrations produce inflammatory reactions in the gastrointestinal tract (vomiting, diarrhea, convulsions, collapse). Ingestion of hypertonic solutions can cause fatal disturbance of body electrolyte and fluid balance, particularly in the young and elderly; less than a tablespoon of salt may severely poison an infant.

B. Inhalation (acute effect)
Very high concentrations of salt dust may result in inflammation of the respiratory tract mucous membranes.

C. Contact with skin and eyes (acute effect)
Not toxic to the eye but concentrations above that of tears cause a stinging sensation, redness and pain. Dry salt and concentrated solutions can withdraw fluid from the skin and cause irritation on prolonged contact; may irritate damaged skin.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)
No data available; not classified.

E. Sensitizing effects
No data available.

F. Specific target organ toxicity (STOT) – single exposure
Target organ effects: cardiovascular system (with excessive ingestion of hypertonic saline).

G. Specific target organ toxicity (STOT) – repeated exposure
No data available.

H. Aspiration hazard
No data available.

Product-specific toxicological information

Identification	Acute Toxicity	Genus
Sodium Chloride CAS: 7647-14-5	LD50 oral: 3000 mg/kg	Rat

12. ECOLOGICAL INFORMATION

Low aquatic toxicity relative to concentration.

Toxicity

Acute Toxicity	Species	Genus
LC50: 6750 mg/l (96h)	Not specified	Fish

Persistence and degradability No data available (inorganic salt; not subject to biodegradation).

Bioaccumulative potential No data available.

Mobility in soil

Koc	Henry	Dry Soil	Moist Soil
No data available	No data available	No data available	No data available

Results of PBT and vPvB assessment Not applicable.

Other adverse effects No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods Disposal should be in accordance with local or national regulations.
Refer to national and local regulations on waste management.

14. TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR/RID)

14.1 UN number	Not applicable – material not included in the "List of Substances Dangerous for Supply"
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not classified as dangerous for transport
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	None; product may cause eye irritation on prolonged exposure to dust
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

Transport of dangerous goods by sea (IMDG)

14.1 UN number	Not applicable – material not included in the "List of Substances Dangerous for Supply"
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not classified as dangerous for transport
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	None
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

Transport of dangerous goods by air (IATA/ICAO)

14.1 UN number	Not applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not classified as dangerous for transport
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	None
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

15. REGULATORY INFORMATION

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

Not classified as hazardous to users. NFPA rating: Health 1, Fire 0, Reactivity 0. It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation

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

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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 classified – no hazard statements assigned to this product per standard public GHS classification of sodium chloride.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources

Manufacturer's reference SDS for refined industrial sodium chloride (CAS 7647-14-5); publicly available GHS classification guidance.

Abbreviations and acronyms

NFPA: National Fire Protection Association | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | TLV: Threshold Limit Value | TWA: Time-Weighted Average | STEL: Short Term Exposure Limit

Disclaimer: 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.

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