Date of Issue:
05 January 2024

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 919b
SRM Name: Sodium Chloride
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is intended for the production of saline solutions of accurately known concentration and the calibration of instrumentation and standardization of procedures used in the determination of sodium and chloride ions. A unit of SRM 919b consists of 30 g of sodium chloride in a single glass bottle.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
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Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
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2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Serious Eye Damage/Irritation Category 2B

Label Elements
Symbol
No symbol

Signal Word
Warning

Hazard Statement(s):

H320	Causes eye irritation.

Precautionary Statement(s):

P264	Wash hands thoroughly after handling.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical attention.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Sodium chloride

Other Designations: Sodium monochloride; table salt; sea salt; common salt

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Sodium chloride	7647-14-5	231-598-3	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water for at least 15 minutes. Thoroughly clean and dry contaminated clothing before reuse.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If a large amount is swallowed, get medical attention.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:

Suitable: Use extinguishing agents appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: Thermal decomposition will produce halogenated and chlorinated compounds, oxides of sodium.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards. Keep separated from incompatible substances (see Section 10, "Stability and Reactivity").

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for this material. The exposure limits for Particulates Not Otherwise Regulated are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates)
5 mg/m^3 (TWA, respirable particulates)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	colorless to white hygroscopic crystalline powder
Molecular Formula:	NaCl
Molar Mass (g/mol):	58.44
Odor:	odorless
Odor threshold:	not available
pH (solution):	5.8 to 8.5 (5 % solution)
Evaporation rate:	not applicable
Melting point/freezing point (ºC):	801 (1474 ºF)
Relative Density (g/mL):	2.165
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	water soluble (35.7 % at 0 ºC); soluble: glycerol; insoluble: hydrochloric acid
Partition coefficient (n-octanol/water):	not available
Particle Size	not available

Thermal Stability Properties:

Autoignition Temperature (ºC):	not applicable
Thermal Decomposition (ºC):	not available
Initial boiling point and boiling range (ºC):	1413 (2575 ºF)
Explosive Limits, LEL (Volume %):	not applicable
Explosive Limits, UEL (Volume %):	not applicable
Flash Point (ºC)	not applicable
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: None reported.

Incompatible Materials: Metals, combustible materials, halogenated compounds.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce halogenated and chlorinated compounds, oxides of sodium.

Hazardous Polymerization: _____ Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: X Inhalation X Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: May aggravate respiratory disorders.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: May cause salty taste and cause irritation to the nose and throat; symptoms may include coughing, dryness, and sore throat.

Skin Contact: May cause mild irritation.

Eye Contact: Moderate irritation; concentrated solutions may cause a stinging sensation.

Ingestion: Ingestion of large doses of hypertonic solutions may cause dryness of mucous membranes and a violent inflammatory reaction in the gastrointestinal tract; ulceration may occur. Chronic ingestion of sodium chloride may result in elevated blood pressure.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified.
Rat, Inhalation LD50: >42 g/m^3 (1 h)
Rat, Oral LD50: 3000 mg/kg

Skin Corrosion/Irritation: Not classified.
Rabbit, Dermal (mild): 500 mg (24 h)
Sodium chloride is classified by the EPA as Toxicity Category IV for mild skin irritation.

Serious Eye Damage/Irritation: Category 2B
Rabbit, Eyes (moderate): 100 mg (24 h), 500 mg (24 h)
Sodium chloride is classified by the EPA as Toxicity Category III for moderate eye irritation effects.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes _X_ No
Sodium chloride is not listed by IARC, NTP or OSHA as a carcinogen.

Reproductive Toxicity: Not classified.
Human, Intraplacental TDLo: 27 mg/kg (pregnant 15 weeks)
Rat, Oral TDLo: 145 g/kg (prior to copulation 7 d, pregnant 1 d to 22 d)

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data:
Fish: Bluegill (*Lepomis macrochirus*) LC50 (flow-through): 5560 mg/L to 6080 mg/L (96 h)
Invertebrate: Water flea (*Daphnia magna*) EC50 (static): 1000 mg/L (48 h)

Persistence and Degradability: No data available.

Bioaccumulative Potential: No bioaccumulation.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Section 313 (40 CFR 372.65): Not regulated.

OSHA Process Safety (29 CFR 1910.119): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	Yes
CHRONIC HEALTH:	No
FIRE:	No
REACTIVE:	No
PRESSURE:	No

State Regulations: California Proposition 65: Not listed.

U.S. TSCA Inventory: Listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations: WHMIS Information is not provided for this material.

16. OTHER INFORMATION

Issue Date: 05 January 2024

Sources: ChemAdvisor, Inc., SDS *Sodium Chloride*, 09 December 2015.

PubChem Database, National Library of Medicine, *Sodium Chloride* CAS# 7647-14-5, Full Record, available at https://pubchem.ncbi.nlm.nih.gov/compound/5234 (accessed Jan 2024).

Center for Disease Control (CDC), NIOSH Pocket Guide to Chemical Hazards, *Particulates Not Otherwise Regulated*, available at https://www.cdc.gov/niosh/npg/npgd0480.html (accessed Jan 2024).

National Institute of Environmental Health Sciences, National Institutes of Health, *Appendix B ICCVAM Summary Review Document: The Low Volume Eye Test*; Appendix to NIH Publication Number 10-7515; available at https://www.niehs.nih.gov/ (accessed Jan 2024).

EPA, Office of Prevention, Pesticides, Environmental Protection and Toxic Substances, *R.E.D. FACTS*, Publication: EPA-738-F-93-015, September 1993; available at https://archive.epa.gov/pesticides/reregistration/web/pdf/4051fact.pdf (accessed Jan 2024).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
ALI	Annual Limit on Intake	OSHA	Occupational Safety and Health Administration
CAS	Chemical Abstracts Service	PEL	Permissible Exposure Limit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	RCRA	Resource Conservation and Recovery Act
CFR	Code of Federal Regulations	REL	Recommended Exposure Limit
DOT	Department of Transportation	RM	Reference Material
EC50	Effective Concentration, 50 %	RQ	Reportable Quantity
EINECS	European Inventory of Existing Commercial Chemical Substances	RTECS	Registry of Toxic Effects of Chemical Substances
EPCRA	Emergency Planning and Community Right-to-Know Act	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	SCBA	Self-Contained Breathing Apparatus
IATA	International Air Transport Association	SRM	Standard Reference Material
IDLH	Immediately Dangerous to Life and Health	STEL	Short Term Exposure Limit
LC50	Lethal Concentration, 50 %	TLV	Threshold Limit Value
LD50	Lethal Dose, 50 %	TPQ	Threshold Planning Quantity
LEL	Lower Explosive Limit	TSCA	Toxic Substances Control Act
MSDS	Material Safety Data Sheet	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System
NRC	Nuclear Regulatory Commission		

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