



SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.90

Section 1 - Product and Company Information

Product Name: Sodium chloride
Product Number: S5886
Brand: Sigma Chemical

Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052

Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
SODIUM CHLORIDE	7647-14-5	No	231-598-3	

Formula: NaCl
Synonyms: Common salt, Dendritis, Extra Fine 200 Salt, Extra Fine 325 Salt, Halite, H.G. blending, Natriumchlorid (German), Purex, Rock salt, Saline, Salt, Sea salt, Table salt, Top flake, USP sodium chloride, White crystal

Section 3 - Hazards Identification

HMIS Rating: Health: 0, Flammability: 0, Reactivity: 0

NFPA Rating: Health: 0, Flammability: 0, Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Firefighting Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling User Exposure
Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage Suitable
Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory
Wear dust mask.
Hand
Protective gloves.
Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance Physical State
Solid

Molecular Weight: 58.44 AMU

pH: 7
BP/BP Range: 1,413 °C
MP/MP Range: 801 °C
Freezing Point: N/A
Vapor Pressure: 1 mmHg, 865 °C
Vapor Density: N/A
Saturated Vapor Conc.: N/A

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SG/Density 2.165 g/cm³
Bulk Density N/A
Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Water Content N/A
Solvent Content N/A
Evaporation Rate N/A
Viscosity N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point °F N/A
Flash Point °C N/A
Explosion Limits N/A

Flammability N/A
Autoignition Temp N/A
Solubility
Solubility in Water: Soluble.
Other Solvents: 36G/100ML @ 20 °C.

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Sodium/sodium oxides, Hydrogen chloride gas.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
Sodium chloride (NaCl) in contact with eyes can cause irritation or redness due to abrasion.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion
May be harmful if swallowed.

Signs and Symptoms of Exposure
Ingestion of large amounts causes vomiting and diarrhea. Dehydration and congestion may occur in internal organs. Hypertonic salt solutions can produce inflammatory reactions in the gastrointestinal tract.

RTECS Number: VZ4725000

Toxicity Data

Oral - Rat: 3000 mg/kg (LD50)
Inhalation - Rat: > 42,000 mg/m³ (LC50)

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Oral - Mouse: 4000 mg/kg (LD50)
Intraperitoneal - Mouse: 2602 MG/KG (LD50)
Subcutaneous - Mouse: 3 GM/KG (LD50)
Intravenous - Mouse: 645 MG/KG (LD50)
Intracervical - Mouse: 131 MG/KG (LD50)
Skin - Rabbit: > 10000 mg/kg (LD50)

Irritation Data

Skin - Rabbit: 50 mg 24H
Remarks: Mild irritation effect
Skin - Rabbit: 500 mg 24H
Remarks: Mild irritation effect
Eyes - Rabbit: 100 mg
Remarks: Mild irritation effect
Eyes - Rabbit: 100 mg 24H
Remarks: Moderate irritation effect
Eyes - Rabbit: 10 mg
Remarks: Moderate irritation effect

Chronic Exposure - Teratogen

Species	Dose	Route of Application	Exposure Time
Rat	1710 MG/KG	Intraperitoneal	(13D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death. Specific Developmental Abnormalities: Musculoskeletal system.			
Mouse	1900 MG/KG	Subcutaneous	(11D PREG)
Result: Effects on Embryo or Fetus: Fetal death.			
Mouse	1900 MG/KG	Subcutaneous	(10D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.			
Mouse	2500 MG/KG	Subcutaneous	(10D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			

Chronic Exposure - Mutagen

Species	Dose	Cell Type	Mutation test	
Human	125 MMOL/L	fibroblast	DNA inhibition	
Rat	16800 MG/KG	Oral	4W	Unscheduled DNA synthesis
Rat	400 MG/KG	Oral		Other mutation test systems
Rat	2338 MG/KG	Intraperitoneal		Cytogenetic analysis
Mouse	101 MMOL/L	lymphocyte		DNA damage
Mouse	57200 UMOL/L	lymphocyte		Mutation in mammalian somatic cells.
Hamster	4 GM/L	lung		Micronucleus test
Hamster	275 MMOL/L	ovary		DNA damage
Hamster	160 MMOL/L	ovary		Cytogenetic analysis
Hamster	7500 MG/L	lung		Cytogenetic analysis

Chronic Exposure - Reproductive Hazard

Species	Dose	Route of Application	Exposure Time
Woman	27 MG/KG	Intraplaccental	(15W PREG)
Result: Effects on Fertility: Abortion.			
Rat	145 GM/KG	Oral	(7D PRE/1-22D PREG)
Result: Effects on Newborn: Delayed effects.			
Rat	56400 MG/KG	Oral	(5D PRE-21D POST)
Result: Maternal Effects: Postpartum. Effects on Newborn: Biochemical and metabolic.			
Rat	10 GM/KG	Intraperitoneal	(17-20D PREG)
Result: Effects on Newborn: Behavioral.			
Rat	10 MG/KG	Parenteral	(1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.			

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Rat	500 MG/KG	Intrauterine	(4D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).			
Rat	50 MG/KG	Intrauterine	(6D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).			
Mouse	13440 MG/KG	Subcutaneous	(2-6D PREG)
Result: Effects on Fertility: Abortion.			
Monkey	6 GM/KG	Intrauterine	(18W PREG)
Result: Effects on Fertility: Abortion.			
Horse, donkey	480 MG/KG	Intraplacental	(45D PREG)
Result: Maternal Effects: Other effects. Endocrine:Estrogenic. Effects on Embryo or Fetus: Fetal death.			

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

United States Regulatory Information
SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.