

MATERIAL SAFETY DATA SHEET

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Version 1.12

Section 1 - Product and Company Information

Product Name SODIUM CHLORIDE, REAGENTPLUS TM, 99.5%
Product Number S9625
Brand SIAL

Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
SODIUM CHLORIDE	7647-14-5	No

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

RTECS Number: VZ4725000

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

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of the normal products of combustion or oxygen deficiency
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

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: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or

type P1 (EN 143) dust masks.
Hand: Protective gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
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	
SG/Density	2.165 g/cm ³	
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	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	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.

TOXICITY DATA

Oral
Rat
3000 mg/kg
LD50

Inhalation
Rat
> 42,000 mg/m³
LC50

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

Species: Mouse
Dose: 1900 MG/KG
Route of Application: Subcutaneous
Exposure Time: (11D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Mouse
Dose: 1900 MG/KG
Route of Application: Subcutaneous
Exposure Time: (10D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.

Species: Mouse
Dose: 2500 MG/KG
Route of Application: Subcutaneous
Exposure Time: (10D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - MUTAGEN

Species: Human
Dose: 125 MMOL/L
Cell Type: fibroblast
Mutation test: DNA inhibition

Species: Rat

Route: Oral
Dose: 16800 MG/KG
Exposure Time: 4W
Mutation test: Unscheduled DNA synthesis

Species: Rat
Route: Oral
Dose: 400 MG/KG
Mutation test: Other mutation test systems

Species: Rat
Route: Intraperitoneal
Dose: 2338 MG/KG
Mutation test: Cytogenetic analysis

Species: Mouse
Dose: 101 MMOL/L
Cell Type: lymphocyte
Mutation test: DNA damage

Species: Mouse
Dose: 57200 UMOL/L
Cell Type: lymphocyte
Mutation test: Mutation in mammalian somatic cells.

Species: Hamster
Dose: 4 GM/L
Cell Type: lung
Mutation test: Micronucleus test

Species: Hamster
Dose: 275 MMOL/L
Cell Type: ovary
Mutation test: DNA damage

Species: Hamster
Dose: 160 MMOL/L
Cell Type: ovary
Mutation test: Cytogenetic analysis

Species: Hamster
Dose: 7500 MG/L
Cell Type: lung
Mutation test: Cytogenetic analysis

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Woman
Dose: 27 MG/KG
Route of Application: Intraplacental
Exposure Time: (15W PREG)
Result: Effects on Fertility: Abortion.

Species: Rat
Dose: 145 GM/KG
Route of Application: Oral
Exposure Time: (7D PRE/1-22D PREG)
Result: Effects on Newborn: Delayed effects.

Species: Rat
Dose: 56400 MG/KG
Route of Application: Oral

Exposure Time: (5D PRE-21D POST)
Result: Effects on Newborn: Biochemical and metabolic. Maternal
Effects: Postpartum.

Species: Rat
Dose: 10 GM/KG
Route of Application: Intraperitoneal
Exposure Time: (17-20D PREG)
Result: Effects on Newborn: Behavioral.

Species: Rat
Dose: 10 MG/KG
Route of Application: Parenteral
Exposure Time: (1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.

Species: Rat
Dose: 500 MG/KG
Route of Application: Intrauterine
Exposure Time: (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).

Species: Rat
Dose: 50 MG/KG
Route of Application: Intrauterine
Exposure Time: (6D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g.,
dead and/or resorbed implants per total number of implants).

Species: Mouse
Dose: 13440 MG/KG
Route of Application: Subcutaneous
Exposure Time: (2-6D PREG)
Result: Effects on Fertility: Abortion.

Species: Monkey
Dose: 6 GM/KG
Route of Application: Intrauterine
Exposure Time: (18W PREG)
Result: Effects on Fertility: Abortion.

Species: Horse, donkey
Dose: 480 MG/KG
Route of Application: Intraplacental
Exposure Time: (45D PREG)
Result: Effects on Embryo or Fetus: Fetal death. Maternal
Effects: Other effects. Endocrine:Estrogenic.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Small amounts may be washed down the drain with excess water.
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 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.