

# Material safety data sheet

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## SECTION 1      CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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Junsei Chemical Co.,Ltd.  
4-16, 4-Chome, Nihonbashi-Honcho,  
Tokyo, 103-0023 Japan  
03-3270-5411

EMERGENCY TELEPHONE NUMBER:  
0489-86-6161(Reagent Chemical Div.)

SUBSTANCE: SODIUM CHLORIDE  
CATALOGUE No. 19015

### TRADE NAMES/SYNONYMS:

COMMON SALT; HALITE; ROCK SALT; SODIUM MONOCHLORIDE; SALT; SEA SALT; TABLE SALT; SODIUM CHLORIDE (NaCl); MORTON SOLAR SALT (MORTON THIOKOL); CLNA; BULK INDUSTRIAL CRUDE SOLAR; BULK SOLAR SAFE-T-SALT; SALT, WHITE CRYSTALS, SOLAR; OHS21105; RTECS VZ4725000

CHEMICAL FAMILY: inorganic, salt

CREATION DATE: Sep 22 2000

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## SECTION 2      COMPOSITION, INFORMATION ON INGREDIENTS

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COMPONENT: SODIUM CHLORIDE  
CAS NUMBER: 7647-14-5  
EC NUMBER (EINECS): 231-598-3  
PERCENTAGE: 99.5

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## SECTION 3      HAZARDS IDENTIFICATION

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NFPA RATINGS (SCALE 0-4): HEALTH=2 HRE=0 REACTIVITY=0

EC CLASSIFICATION (CALCULATED):

Xi Irritant

R 36

### EMERGENCY OVERVIEW:

CHANGE IN APPEARANCE: hygroscopic

COLOR: colorless to white

PHYSICAL FORM: crystalline powder

ODOR: odorless

MAJOR HEALTH HAZARDS: eye irritation

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: sore throat

LONG TERM EXPOSURE: no information is available

SKIN CONTACT:

SHORT TERM EXPOSURE: mild irritation

LONG TERM EXPOSURE: same as effects reported in short term exposure

EYE CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: same as effects reported in short term exposure

INGESTION:

SHORT TERM EXPOSURE: nausea, vomiting, diarrhea, lung congestion, effects on the brain, convulsions, coma

LONG TERM EXPOSURE: no information on significant adverse effects

CARCINOGEN STATUS:

OSHA: N

NTP: N

IARC: N

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SECTION 4 FIRST AID MEASURES  
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INHALATION: Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION: Never make an unconscious person vomit or drink fluids. Give large amounts of water. Do not induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

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SECTION 5 FIRE FIGHTING MEASURES  
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FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

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### OCCUPATIONAL RELEASE:

Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

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## SECTION 7 HANDLING AND STORAGE

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Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances. Store in a tightly closed container.

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## SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

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### EXPOSURE LIMITS:

#### SODIUM CHLORIDE:

No occupational exposure limits established.

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any dust, mist, and fume respirator.

Any air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a dust, mist, and fume filter.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL STATE: solid

COLOR: colorless to white

CHANGE IN APPEARANCE: hygroscopic

PHYSICAL FORM: crystalline powder

ODOR: odorless

MOLECULAR WEIGHT: 58.44

MOLECULAR FORMULA: NA-CL

BOILING POINT: 2575 F (1413 C)

MELTING POINT: 1474 F (801 C)

VAPOR PRESSURE: 1 mmHg @ 865 C

VAPOR DENSITY: Not applicable

SPECIFIC GRAVITY (water=1): 2.165 @ 25 C

WATER SOLUBILITY: 35.7% @ 0 C

PH: 5.5-8.5 (5% solution)

VOLATILITY: Not applicable

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not applicable

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SOLVENT SOLUBILITY:

Soluble: glycerol

Slightly Soluble: alcohol, liquid ammonia

Insoluble: hydrochloric acid

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## SECTION 10 STABILITY AND REACTIVITY

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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: None reported.

INCOMPATIBILITIES: halogens, combustible materials, metals

SODIUM CHLORIDE:

BROMINE TRIFLUORIDE: Possible violent reaction.

BUILDING MATERIALS: May be attacked.

DICHLOROMALEIC ANHYDRIDE + UREA: Explosive reaction above 118 C.

LITHIUM (BURNING): Releases violently flammable sodium.

METALS: May be attacked.

NITROGEN COMPOUNDS: May form explosive compounds under electrolysis conditions.

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: halogenated compounds, oxides of sodium

POLYMERIZATION: Will not polymerize.

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SECTION 11 TOXICOLOGICAL INFORMATION  
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SODIUM CHLORIDE:

IRRITATION DATA:

50 mg/24 hour(s) skin-rabbit mild; 500 mg/24 hour(s) skin-rabbit mild; 100 mg eyes-rabbit mild; 100 mg/24 hour(s) eyes-rabbit moderate; 10 mg eyes-rabbit moderate

TOXICITY DATA:

12357 mg/kg/23 day(s) continuous oral-human TDLo; 3 gm/kg oral-rat LD50; >42 gm/m<sup>3</sup>/1 hour(s) inhalation-rat LC50; 3500 mg/kg subcutaneous-rat LDLo; 4 gm/kg oral-mouse LD50; 2602 mg/kg intraperitoneal-mouse LD50; 3 gm/kg subcutaneous-mouse LD50; 645 mg/kg intravenous-mouse LD50; 131 mg/kg intracervical-mouse LD50; 2 gm/kg intravenous-dog LDLo; 8 gm/kg oral-rabbit LDLo; >10 gm/kg skin-rabbit LD50; 1100 mg/kg intravenous-rabbit LDLo; 2160 mg/kg subcutaneous-guinea pig LDLo; 300 mg/kg intravenous-guinea pig LDLo; 300 mg/kg parenteral-guinea pig LDLo; 300 mg/kg intraarterial-guinea pig LDLo; 16800 mg/kg/28 day(s) continuous oral-rat TDLo

LOCAL EFFECTS:

Irritant: eye

ACUTE TOXICITY LEVEL:

Moderately Toxic: ingestion

MUTAGENIC DATA:

other mutation test systems - Escherichia coli 150 mmol/L; mutation in microorganisms - Saccharomyces cerevisiae 2 mol/L (-S9); DNA inhibition - human fibroblast 125 mmol/L; unscheduled DNA synthesis - rat oral 16800 mg/kg 4 week(s)-continuous; other mutation test systems - rat oral 400 mg/kg; cytogenetic analysis - rat intraperitoneal 2338 mg/kg; DNA damage - mouse lymphocyte 101 mmol/L; mutation in mammalian somatic cells - mouse lymphocyte 57200 umol/L; micronucleus test - hamster lung 4 gm/L; DNA damage - hamster ovary 275 mmol/L; cytogenetic analysis - hamster ovary 160 mmol/L; cytogenetic analysis - hamster lung 7500 mg/L

REPRODUCTIVE EFFECTS DATA:

27 mg/kg intraplacental-woman TDLo 15 week(s) pregnant female continuous; 145 gm/kg oral-rat TDLo 7 day(s) pre pregnancy/1-22 day(s) pregnant female continuous; 56400 mg/kg oral-rat TDLo 5 day(s) pre pregnancy/21 day(s) post pregnancy continuous; 1710 mg/kg intraperitoneal-rat TDLo 13 day(s) pregnant female continuous; 10 gm/kg intraperitoneal-rat TDLo 17-20 day(s) pregnant female continuous; 10 mg/kg parenteral-rat TDLo 1 day(s) pre pregnancy continuous; 500 mg/kg intrauterine-rat TDLo 4 day(s) pregnant female

continuous; 50 mg/kg intrauterine-rat TDLo 6 day(s) pregnant female  
continuous; 1900 mg/kg subcutaneous-mouse TDLo 11 day(s) pregnant female  
continuous; 1900 mg/kg subcutaneous-mouse TDLo 10 day(s) pregnant female  
continuous; 2500 mg/kg subcutaneous-mouse TDLo 10 day(s) pregnant female  
continuous; 13440 mg/kg subcutaneous-mouse TDLo 2-6 day(s) pregnant female  
continuous; 6 gm/kg intrauterine-monkey TDLo 18 week(s) pregnant female  
continuous; 480 mg/kg intraplacental-horse, donkey TDLo 45 day(s) pregnant female continuous

#### HEALTH EFFECTS:

##### INHALATION:

###### ACUTE EXPOSURE:

SODIUM CHLORIDE: Inhalation of dust may leave a salty taste and cause irritation to the nose and throat. Symptoms may include coughing, dryness, and sore throat.

###### CHRONIC EXPOSURE:

SODIUM CHLORIDE: No data available.

##### SKIN CONTACT:

###### ACUTE EXPOSURE:

SODIUM CHLORIDE: May cause mild irritation unless the contact is intensive which may result in dermatitis.

###### CHRONIC EXPOSURE:

SODIUM CHLORIDE: Primary irritant dermatitis may result from sodium chloride being trapped between the skin and jewelry since some metal alloys may be corroded and discolored by such contact.

##### EYE CONTACT:

###### ACUTE EXPOSURE:

SODIUM CHLORIDE: Solid particles or hypertonic solutions may cause redness, pain, irritation and a stinging sensation on contact. Solutions more dilute than 0.9% sodium chloride cause increased permeability of the corneal epithelium.

###### CHRONIC EXPOSURE:

SODIUM CHLORIDE: Repeated and prolonged contact with irritants may cause conjunctivitis.

##### INGESTION:

###### ACUTE EXPOSURE:

SODIUM CHLORIDE: Ingestion of very large doses of hypertonic solutions may cause dryness of mucous membranes and a violent inflammatory reaction in the gastrointestinal tract; ulceration may occur. Symptoms may include nausea, vomiting, diarrhea, anorexia, thirst, fever, muscular twitching, rigidity, convulsions, hypernea and prostration. Dehydration and congestion may occur in most internal organs, particularly the meninges and brain. Central nervous system disturbances such as confusion and coma may result. Generalized and pulmonary edema are possible. Death may occur from respiratory failure secondary to an acute encephalopathy.

CHRONIC EXPOSURE:

SODIUM CHLORIDE: Diets high in sodium chloride may cause elevated blood pressure, especially in predisposed individuals. Reproductive effects have been reported in animals.

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SECTION 12 ECOLOGICAL INFORMATION  
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ECOTOXICITY DATA:

FISH TOXICITY: 40000 ug/L 96 hour(s) LC50 (Mortality) Goldfish (*Carassius auratus*)

INVERTEBRATE TOXICITY: 402600 ug/L 48 hour(s) EC50 (Immobilization) Water flea (*Daphnia magna*)

ALGAL TOXICITY: 1000000 ug/L 35 week(s) (Population Growth) Blue-green algae (*Anacystis nidulans*)

PHYTOTOXICITY: 50000 ug/L 21 hour(s) (Enzyme) Pondweed (*Potamogeton alpinus*)

OTHER TOXICITY: 400000 ug/L 6 hour(s) (Mortality) Frog (*Rana breviceps*)

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SECTION 13 DISPOSAL CONSIDERATIONS  
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Dispose in accordance with all applicable regulations.

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SECTION 14 TRANSPORT INFORMATION  
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No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

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SECTION 15 REGULATORY INFORMATION  
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U.S. REGULATIONS:

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): N

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N  
SARA SECTION 313 (40CFR372.65): N  
SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):  
ACUTE: Y  
CHRONIC: N  
FIRE: N  
REACTIVE: N  
SUDDEN RELEASE: N  
OSHA PROCESS SAFETY (29CFR1910.119): N  
STATE REGULATIONS:  
California Proposition 65: N  
EUROPEAN REGULATIONS:  
EC NUMBER (EINECS): 231-598-3

EC RISK AND SAFETY PHRASES:  
R 36                   Irritating to eyes.  
  
S 2                    Keep out of reach of children.  
S 24                  Avoid contact with skin.  
S 25                  Avoid contact with eyes.  
S 26                  In case of contact with eyes, rinse immediately with plenty  
                          of water and seek medical advice.  
S 46                  If swallowed, seek medical advice immediately and show this  
                          container or label.

GERMAN REGULATIONS:  
WATER HAZARD CLASS (WGK): 0 (Official German Classification)

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SECTION 16    OTHER INFORMATION  
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