# SAFETY DATA SHEET

**Australian statement of hazardous nature :** Classified as not hazardous according to criteria of Safe Work Australia.

## Section 1 - Identification

| | |
|---|---|
| **Product Name** | **Sodium chloride extra pure** |
| **CAS No** | 7647-14-5 |

| | |
|---|---|
| **Product Code** | **AJA1226, AJA465, AJA466, AJA950, APPA1149, APPA1371, APPA2942, BSPSL944** |
| **Address** | ThermoFisher Scientific Australia Pty Ltd<br>5 Caribbean Drive, Scoresby<br>VICTORIA 3179, Australia |
| **Emergency Tel.** | **CHEMTREC®**<br>**03 9757 4559 or +613 9757 4559** |
| **Telephone / Fax Numbers** | Tel: 1300 735 292<br>Fax: 1800 067 639 |
| **E-mail address** | ANZinfo@thermofisher.com |

| | |
|---|---|
| **Recommended Use** | Laboratory chemicals. |
| **Uses advised against** | This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern. |

## Section 2 - Hazard(s) Identification

**Classification under Safe Work Australia**

Classified as not hazardous according to criteria of Safe Work Australia.

**Physical hazards**
No hazards identified

**Health hazards**

**Environmental hazards**
No hazards identified

**Label Elements** None required

**Other information**

This product does not contain any known or suspected endocrine disruptors

# Section 3 - Composition and Information on Ingredients

| Component | CAS No | Weight % |
|---|---|---|
| Sodium chloride | 7647-14-5 | >95 |

# Section 4 - First Aid Measures

**Inhalation**

Remove from exposure, rest and keep warm.

**Ingestion**

Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice ifeffects persist.

**Skin Contact**

Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. Seek medical attention in severe cases, or if irritation develops.

**Eye Contact**

Immediately flush eyes with plenty of water for at least 15 minutes. Take care not to rinse contaminated water into the non-affected eye. Get medical attention if symptoms occur.

**Self-Protection of the First Aider**

No information available.

**First Aid Facilities**

Eyewash, safety shower and washroom.

**Most important symptoms and effects**

. Repeated ingestion of large amounts of salt can lead to vascular effects (blood pressure elevation not characterized in autonomic section, with resulting systemic effects such as oedema), disturbances of body electrolyte and fluid balance, behavioural effects (changes in motor activity, irritability, somnolence (general depressed activity), convulsions or effect on seizure threshold, muscle contraction or spasticity), endocrine effects (changes in adrenal weight), eye effects and damage to the skin and stomach

**Notes to Physician**

Treat symptomatically.

# Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Hazardous Decomposition Products**

Hygroscopic. Reacts with most nonnoble metals such as iron or steel, building materials (such as cement). Reactions with bromium trifluoride and lithium are violent. Electrolysis of sodium chloride in presence of nitrogenous compounds to produce chlorine may lead to formation of explosive nitrogen trichloride. Reaction of sodium chloride, urea, and dichloromaleic anhydride at 118 °C is vigorously exothermic and potentially explosive. Reaction of sodium chloride with water at >1100 °C is explosive.

**Specific Hazards Arising from the Chemical**

**Special protective equipment and precautions for fire fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# Section 6 - Accidental Release Measures

**Emergency procedures**

Ensure adequate ventilation.

**Environmental Precautions**
See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

**Methods for Containment and Clean Up**

**Clean-up methods - small spillage**
Sweep up and shovel into suitable containers for disposal. Dispose of waste product or used containers according to local regulations.

**Clean-up methods - large spillage**
No information available.

**Reference to Other Sections**
Refer to protective measures listed in Sections 8 and 13.

# Section 7 - Handling and Storage

**Precautions for Safe Handling**
Avoid substance contact and generation and inhalation of dust. Avoid contact with skin, eyes or clothing.

**Conditions for Safe Storage, Including any Incompatibilities**
Store contents under tightly closed, labelled, corrosion-resistant containers, in a cool, dry, well-ventilated area away from incompatible materials. Hygroscopic . Sodium chloride solutions are corrosive to base metals. Store at room temperature (15 to 25 °C recommended).

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

# Section 8 - Exposure Controls and Personal Protection

**Exposure limits**
The product does not contain any hazardous materials with occupational exposure limits established.

**Biological limit values**
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Exposure Controls**
**Engineering Measures**
Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

**Eye Protection** — Wear safety glasses with side shields (or goggles) (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection** — Protective gloves

| Glove material | Breakthrough time | Glove thickness | AUS/NZ Standard | Glove comments |
|---|---|---|---|---|
| Natural rubber<br>Nitrile rubber<br>Neoprene<br>PVC | See manufacturers recommendations | - | AS/NZS 2161 | (minimum requirement) |

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

| | |
|---|---|
| **Skin and body protection** | Long sleeved clothing |
| **Repiratory Protection** | Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of repiratory protective devices |
| **Recommended Filter type:** | Particulates filter conforming to EN 143 (or AUS/NZ equivalent) |
| **Recommended half mask:-** | Particle filtering: EN149:2001 (or AUS/NZ equivalent)<br>When RPE is used a face piece Fit Test should be conducted |
| **Hygiene Measures** | Handle in accordance with good industrial hygiene and safety practice. |
| **Environmental exposure controls** | Prevent product from entering drains. |

# Section 9 - Physical and Chemical Properties

**Information on basic physical and chemical properties**

| | | |
|---|---|---|
| **Appearance** | White | |
| **Physical State** | Solid | |
| **Odor** | Odourless to slight odour. | |
| **Odor Threshold** | No data available | |
| **pH** | 6.7-7.3 ( Aqueous solution) | |
| **Melting Point/Range** | 801 °C / 1473.8 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | 1413-1461 °C / 2575.4-2661.8 °F | 1013 hPA |
| **Flash Point** | Not applicable °F | **Method -** No information available |
| **Evaporation Rate** | Not applicable | |
| **Flammability (solid,gas)** | Non combustible material | |
| **Explosion Limits** | No data available | Electrolysis of sodium chloride in presence of nitrogenous compounds to produce chlorine may lead to formation of explosive nitrogen trichloride. Potentially explosive reaction with dichloromaleic anhydride + urea. Reacts violently with Bromium trifluoride and Lithium. |
| **Vapor Pressure** | 1.33 hPa (1 mmHg) at 865 °C | |
| **Vapor Density** | No information available | No information available |
| **Specific Gravity / Density** | 2.165 | |
| **Bulk Density** | No data available | |
| **Water Solubility** | Readily soluble in cold water (35.7g in 100ml water at 0 °C). Slightly more soluble in hot water (39.12g in 100ml water at 100 °C). | |
| **Solubility in other solvents** | Soluble in glycerol, ethylene glycol, formic acid and ammonia; very slightly soluble in alcohol (methanol and ethanol) and monoethanolamine; insoluble in hydrochloric acid. | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Autoignition Temperature** | Not applicable | |
| **Decomposition Temperature** | No data available | |
| **Viscosity** | Viscosity of saturated aqueous solution = 1.93 mPa-s. | |

**Explosive Properties** No information available
**Oxidizing Properties** No information available

**Other information**
**Molecular Formula** NaCl
**Molecular Weight** 58.44

# Section 10 - Stability and Reactivity

**Reactivity** None known, based on information available

**Stability** Stable under normal temperatures, pressures and conditions of use and storage. Hygroscopic: absorbs moisture or water from the air.

**Conditions to Avoid** Extremes of temperature, dust generation, exposure to moist air or water and incompatible materials.

**Incompatible Materials** None known. Strong oxidizing agents, metals, strong acids, alkali metals (lithium), bromine trifluoride, nitro compounds, dichloromaleic anhydride + urea

**Hazardous Decomposition Products** Hygroscopic. Reacts with most nonnoble metals such as iron or steel, building materials (such as cement). Reactions with bromium trifluoride and lithium are violent. Electrolysis of sodium chloride in presence of nitrogenous compounds to produce chlorine may lead to formation of explosive nitrogen trichloride. Reaction of sodium chloride, urea, and dichloromaleic anhydride at 118 °C is vigorously exothermic and potentially explosive. Reaction of sodium chloride with water at >1100 °C is explosive.

**Hazardous Polymerization** Hazardous polymerization does not occur.

# Section 11 - Toxicological Information

**Information on Toxicological Effects**

**Product Information**

**(a) acute toxicity;**
**Oral** Based on available data, the classification criteria are not met
**Dermal** Based on available data, the classification criteria are not met
**Inhalation** Based on available data, the classification criteria are not met

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Sodium chloride | LD50 = 3550 mg/kg ( Rat ) | LD50 > 10000 mg/kg ( Rabbit ) | LC50 > 42 mg/L ( Rat ) 1 h |

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available
**Eye Contact** May cause mild to moderate eye irritation, with redness, itching and pain

**(d) respiratory or skin sensitization;**
**Respiratory** May cause mild mild nasal irritation with exposure to high dust levels and hypertension.
**Skin** May cause mild skin irritation, or irritation to damaged skin, resulting in redness and itching. Absorption can occur with effects similar to those via ingestion.

**(e) germ cell mutagenicity;** Sodium chloride (CAS# 7647-14-5): DNA inhibition system-human: fibroblast 125 mmol/l.

**(f) carcinogenicity;** No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;** No data available

**Reproductive Effects** Causes adverse reproductive effects in humans (fetotoxicity, abortion) by intraplacental route. High intake of sodium chloride, from occupational exposure. May cause adverse reproductive effects and birth defects in animals, particularly rats and mice (fetotoxicity, abortion, musculoskeletal abnormalities, and maternal effects (effects on ovaries, fallopian tubes) by oral, intraperitoneal, intraplacental, intrauterine, parenteral, and subcutaneous routes. In experimental animals, sodium chloride has caused delayed effects on newborns, has been fetotoxic and has caused birth defects and abortions in rats and mice (RTECS, 1997). While sodium chloride has been used as a negative control in some reproductive studies, it has also been used as an example that almost any chemical can cause birth defects in experimental animals if studied under the right conditions (Nishimura

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** Not applicable
Solid

**Symptoms / effects,both acute and delayed** Repeated ingestion of large amounts of salt can lead to vascular effects (blood pressure elevation not characterized in autonomic section, with resulting systemic effects such as oedema), disturbances of body electrolyte and fluid balance, behavioural effects (changes in motor activity, irritability, somnolence (general depressed activity), convulsions or effect on seizure threshold, muscle contraction or spasticity), endocrine effects (changes in adrenal weight), eye effects and damage to the skin and stomach

# Section 12 - Ecological Information

**Ecotoxicity effects** No ecological problems are to be expected when the product is handled and used with due care and attention.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|---|---|---|---|---|
| Sodium chloride | Pimephals prome: LC50: 7650 mg/L/96h | EC50: 1000 mg/L/48h | | |

**Persistence and Degradability** No information available

**Persistence** Persistence is unlikely.

**Degradability** Not relevant for inorganic substances.

**Degradation in sewage treatment plant** No information available.

**Bioaccumulative Potential** Bioaccumulation is unlikely

**Mobility** . Passage from aqueous solution into the atmosphere is not to be expected

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Ozone Depletion Potential** This product does not contain any known or suspected substance

# Section 13 - Disposal Considerations

**Waste from Residues/Unused Products** Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Chemical wastes should be disposed through a licensed commercial waste collection service. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

# Section 14 - Transport Information

**IMDG/IMO** Not regulated

**ADG** Not regulated

**IATA** Not regulated

**Environmental hazards** No hazards identified

**Special Precautions** No special precautions required

**Additional information** None known

# Section 15 - Regulatory Information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National Regulations** **Australia**

See section 8 for national exposure control parameters.

**Standard for the Uniform Scheduling of Medicines and Poisons**
No poison schedule number allocated.

**Australian Industrial Chemicals Introduction Scheme (AICIS)**

| Component | Australian Industrial Chemicals Introduction Scheme (AICIS) | Additional information |
|---|---|---|
| Sodium chloride - 7647-14-5 | Present | - |

**Australian - Illicit Drug Precursors/Reagents Substance List**
This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

**Chemicals of Security Concern**
This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

**National pollutant inventory** Not applicable

**Prohibition or notification/licensing requirements**
Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

**International Inventories**

| Component | AICS | NZIoC | EINECS | ELINCS | TSCA | DSL | NDSL | PICCS | ENCS | ISHL | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium chloride | X | X | 231-598-3 | - | X | X | - | X | X | X | X | KE-31387 |

**Legend:** X - Listed. '-' - Not Listed. **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

**International Regulations**

**Ozone Depletion Potential** This product does not contain any known or suspected substance

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Rotterdam Convention (PIC)** Not applicable

**Basel convention on the control of transboundary movements of hazardous wastes and their dispoal**
Not applicable.

| Component | CAS No | OECD HPV | Restriction of Hazardous Substances (RoHS) | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|---|---|---|---|---|---|
| Sodium chloride | 7647-14-5 | Listed | Not applicable | Not applicable | Not applicable |

**Authorisation/Restrictions according to EU REACH** Not applicable

# Section 16 - Other Information

**Legend**

**AICS** - Australian Inventory of Chemical Substances
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**IECSC** - Chinese Inventory of Existing Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**TWA** - Time Weighted Average
**IARC** - International Agency for Research on Cancer
**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association
**MARPOL** - International Convention for the Prevention of Pollution from Ships
**NZS 5433:2020** - Transport of Dangerous Goods on Land
**LD50** - Lethal Dose 50%
**EC50** - Effective Concentration 50%
**NZIoC** - New Zealand Inventory of Chemicals
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**ENCS** - Japanese Existing and New Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**CAS** - Chemical Abstracts Service
**ACGIH** - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)
**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code
**ADG** - Australian Code for the Transport of Dangerous Goods by Road and Rail
**OECD** - Organisation for Economic Co-operation and Development
**LC50** - Lethal Concentration 50%
**ATE** - Acute Toxicity Estimate

**WEL** - Workplace Exposure Limit
**DNEL** - Derived No Effect Level
**POW** - Partition coefficient Octanol:Water
**vPvB** - very Persistent, very Bioaccumulative
**VOC** - (Volatile Organic Compound)

**RPE** - Respiratory Protective Equipment
**NOEC** - No Observed Effect Concentration
**BCF** - Bioconcentration factor
**PBT** - Persistent, Bioaccumulative, Toxic

**Key literature references and sources for data**
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Training Advice**
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.

| | |
|---|---|
| **Revision Date** | 12-Mar-2025 |
| **Revision Summary** | Update to GHS format. |

**This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).**

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

# End of Safety Data Sheet