ThermoFisher SCIENTIFIC

# SAFETY DATA SHEET

## Section 1 - Identification

**Product Name** **Hanks' Balanced Salt Solution (1X), with calcium, without magnesium, without phenol red**

| | |
|---|---|
| **Product Code** | **J67807** |
| **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**
No hazards identified

**Environmental hazards**
No hazards identified

**Label Elements** None required

**Other information**

## Section 3 - Composition and Information on Ingredients

| Component | CAS No | Weight % |
|---|---|---|
| Water | 7732-18-5 | 98.99 |
| Sodium chloride | 7647-14-5 | 0.806 |
| Glucose | 50-99-7 | 0.1 |
| Potassium chloride | 7447-40-7 | 0.04 |
| Sodium bicarbonate | 144-55-8 | 0.035 |
| Calcium chloride | 10043-52-4 | 0.014 |
| Dihydrogen potassium phosphate | 7778-77-0 | 0.006 |
| Sodium phosphate dibasic | 7558-79-4 | 0.005 |

# Section 4 - First Aid Measures

**Inhalation** Remove to fresh air. Get medical attention immediately if symptoms occur.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Self-Protection of the First Aider** No special precautions required.

**First Aid Facilities** Eyewash, safety shower and washroom.

**Most important symptoms and effects** None reasonably foreseeable.

**Notes to Physician** Treat symptomatically.

# Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media**
Not combustible.

**Extinguishing media which must not be used for safety reasons**
No information available.

**Hazardous Decomposition Products**
Hydrogen chloride, Oxides of phosphorus, Calcium oxides, Potassium oxides, Sodium oxides.

**Specific Hazards Arising from the Chemical**
None reasonably foreseeable.

**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. Use personal protective equipment as required.

**Environmental Precautions**
See Section 12 for additional Ecological Information. Should not be released into the environment.

**Methods for Containment and Clean Up**

**Clean-up methods - small spillage**
Sweep up and shovel into suitable containers for disposal.

**Clean-up methods - large spillage**
Not applicable, packaged goods.

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

# Section 7 - Handling and Storage

**Precautions for Safe Handling**
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

**Conditions for Safe Storage, Including any Incompatibilities**
Keep refrigerated.

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**
None under normal use conditions.

**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:** | Particle filter (or AUS/NZ equivalent) |

| | |
|---|---|
| **Hygiene Measures** | Handle in accordance with good industrial hygiene and safety practice. |
| **Environmental exposure controls** | No information available. |

# Section 9 - Physical and Chemical Properties

**Information on basic physical and chemical properties**

| | | |
|---|---|---|
| **Appearance** | Colorless | |
| **Physical State** | Liquid | |
| **Odor** | No information available | |
| **Odor Threshold** | No data available | |
| **pH** | No information available | |
| **Melting Point/Range** | No data available | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | No information available | |
| **Flash Point** | No information available | **Method -** No information available |
| **Evaporation Rate** | No data available | |
| **Flammability (solid,gas)** | Not applicable | Liquid |
| **Explosion Limits** | No data available | |
| **Vapor Pressure** | 23 hPa @ 20 °C | |
| **Vapor Density** | No data available | (Air = 1.0) |
| **Specific Gravity / Density** | No data available | |
| **Bulk Density** | Not applicable | Liquid |
| **Water Solubility** | Miscible | |
| **Solubility in other solvents** | No information available | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Autoignition Temperature** | No data available | |
| **Decomposition Temperature** | No data available | |
| **Viscosity** | No data available | |
| **Explosive Properties** | No information available | |
| **Oxidizing Properties** | No information available | |

**Other information**

# Section 10 - Stability and Reactivity

| | |
|---|---|
| **Reactivity** | None known, based on information available |
| **Stability** | Stable under normal conditions. |
| **Conditions to Avoid** | Heat, flames and sparks. |
| **Incompatible Materials** | None known. |

**Hazardous Decomposition Products** Hydrogen chloride. Oxides of phosphorus. Calcium oxides. Potassium oxides. Sodium oxides.

**Hazardous Polymerization** No information available.

# 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

**Toxicology data for the components**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Water | - | - | - |
| Sodium chloride | LD50 = 3 g/kg ( Rat ) | LD50 > 10000 mg/kg ( Rabbit ) | LC50 > 42 mg/L ( Rat ) 1 h |
| Glucose | 25.8 g/kg ( Rat ) | | |
| Potassium chloride | LD50 = 2600 mg/kg ( Rat ) | | |
| Sodium bicarbonate | LD50 = 4220 mg/kg ( Rat ) | | |
| Calcium chloride | 2301 mg/kg ( Rat ) | LD50 > 5000 mg/kg ( Rabbit ) | |
| Dihydrogen potassium phosphate | LD50 = 3200 mg/kg ( Rat ) | LD50 > 4640 mg/kg ( Rabbit ) | LC50 > 0.83 mg/L ( Rat ) 4 h |
| Sodium phosphate dibasic | LD50 = 17 g/kg ( Rat ) | | |

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

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**

**Respiratory** No data available

**Skin** No data available

**(e) germ cell mutagenicity;** No data available

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

There are no known carcinogenic chemicals in this product

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

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

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

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Symptoms / effects,both acute and delayed** No information available

# Section 12 - Ecological Information

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|---|---|---|---|---|
| Sodium chloride | Pimephals prome: LC50: 7650 mg/L/96h | EC50: 1000 mg/L/48h | | |
| Potassium chloride | Lepomis macrochirus: LC50: 1060 mg/L /96h Pimephales promelas: LC50: 750 - 1020 mg/L /96h | EC50: 825 mg/L/48h | EC50: 2500 mg/L/72h | |
| Sodium bicarbonate | LC50: 8250 - 9000 mg/L, 96h static (Lepomis macrochirus) | EC50: 2350 mg/L/48h | EC50: 650 mg/L/120h | - |
| Calcium chloride | Lepomis macrochirus: LC50: 10650 mg/L/96h | EC50: 52 mg/L/48h | | |

**Persistence and Degradability**

**Persistence** Miscible with water, Persistence is unlikely, based on information available.

**Bioaccumulative Potential** Bioaccumulation is unlikely

**Mobility** The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility Highly mobile in soils

**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** Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

**Other Information** Chemical wastes should be disposed through a licensed commercial waste collection service.

# 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**
Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

| Component | Standard for the Uniform Scheduling of Medicines and Poisons |
|---|---|
| Potassium chloride - 7447-40-7 | Schedule 4 listed - in oral preparations for human therapeutic use except: a) when containing <=550 mg of Potassium chloride per dosage unit, b) in preparations for oral rehydration therapy, c) in preparations for oral use for bowel cleansing prior to diagnostic medical and surgical procedures, or d) in preparations for enteral feeding |
| Dihydrogen potassium phosphate - 7778-77-0 | Schedule 10 listed |
| Sodium phosphate dibasic - 7558-79-4 | Schedule 5 listed - being the carbonate, silicate or phosphate salts of sodium or potassium alone or in any combination: in solid orthodontic device cleaning preparations, the pH of which as an in-use aqueous solution is >11.5, in solid automatic dishwashing preparations, the pH of which in a 500 g/L aqueous solution or mixture is >11.5 but <=12.5;in other solid preparations, the pH of which in a 10 g/L aqueous solution is >11.5, or in liquid or semi-solid preparations, the pH of which is >11.5, unless: in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules Schedule 5 listed - being the Carbonate, Silicate or Phosphate salts of Sodium or Potassium alone or in any combination: in solid orthodontic device cleaning preparations as an in-use aqueous solution;in solid automatic dishwashing preparations in a 500 g/L aqueous solution or mixture but with pH <=12.5;in other solid preparations in a 10 g/L aqueous solution, or in liquid or semi-solid preparations, unless in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules<br>Schedule 6 listed - being the carbonate, silicate or phosphate salts of sodium or potassium alone or in any combination for non-domestic use: in solid automatic dishwashing preparations, the pH of which in a 500 g/L aqueous solution or mixture is >12.5, or in liquid or semi-solid automatic dishwashing preparations, the pH of which is >12.5<br>Schedule 10 listed |

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

| Component | Australian Industrial Chemicals Introduction Scheme (AICIS) | Additional information |
|---|---|---|
| Water - 7732-18-5 | Present | - |
| Sodium chloride - 7647-14-5 | Present | - |
| Glucose - 50-99-7 | Present | - |
| Potassium chloride - 7447-40-7 | Present | - |
| Sodium bicarbonate - 144-55-8 | Present | - |
| Calcium chloride - 10043-52-4 | Present | - |
| Dihydrogen potassium phosphate - 7778-77-0 | Present | - |
| Sodium phosphate dibasic - 7558-79-4 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | X | X | 231-791-2 | - | X | X | - | X | X | | X | KE-35400 |
| Sodium chloride | X | X | 231-598-3 | - | X | X | - | X | X | X | X | KE-31387 |
| Glucose | X | X | 200-075-1 | - | X | X | - | X | X | X | X | KE-17727 |
| Potassium chloride | X | X | 231-211-8 | - | X | X | - | X | X | X | X | KE-29086 |
| Sodium bicarbonate | X | X | 205-633-8 | - | X | X | - | X | X | X | X | KE-31360 |
| Calcium chloride | X | X | 233-140-8 | - | X | X | - | X | X | X | X | KE-04496 |
| Dihydrogen potassium phosphate | X | X | 231-913-4 | - | X | X | - | X | X | X | X | KE-28622 |
| Sodium phosphate dibasic | X | X | 231-448-7 | - | X | X | - | X | X | X | X | KE-12344 |

**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 |
|---|---|---|---|---|---|
| Water | 7732-18-5 | Listed | Not applicable | Not applicable | Not applicable |
| Sodium chloride | 7647-14-5 | Listed | Not applicable | Not applicable | Not applicable |
| Glucose | 50-99-7 | Listed | Not applicable | Not applicable | Not applicable |
| Potassium chloride | 7447-40-7 | Listed | Not applicable | Not applicable | Not applicable |
| Sodium bicarbonate | 144-55-8 | Listed | Not applicable | Not applicable | Not applicable |
| Calcium chloride | 10043-52-4 | Listed | Not applicable | Not applicable | Not applicable |
| Dihydrogen potassium phosphate | 7778-77-0 | Listed | Not applicable | Not applicable | Not applicable |
| Sodium phosphate dibasic | 7558-79-4 | Listed | Not applicable | Not applicable | Not applicable |

**Authorisation/Restrictions according to EU REACH**

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|---|---|---|---|
| Calcium chloride | - | Use restricted. See item 75. (see link for restriction details) | - |

*https://echa.europa.eu/substances-restricted-under-reach*

# 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 5433:2012** - Transport of Dangerous Goods on Land
**LD50** - Lethal Dose 50%
**EC50** - Effective Concentration 50%
**WEL** - Workplace Exposure Limit
**DNEL** - Derived No Effect Level
**POW** - Partition coefficient Octanol:Water
**vPvB** - very Persistent, very Bioaccumulative
**VOC** - (Volatile Organic Compound)

**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
**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

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

| | |
|---|---|
| **Physical hazards** | On basis of test data |
| **Health Hazards** | Calculation method |
| **Environmental hazards** | Calculation method |

**Training Advice**
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

| | |
|---|---|
| **Revision Date** | 19-Nov-2022 |
| **Revision Summary** | Not applicable. |

**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