# SAFETY DATA SHEET

## Section 1 - Identification

**Product Name** **Stearic acid**

**Synonyms** Octadecanoic acid

| | |
|---|---|
| **Product Code** | **ACR17449, AJA1255, ALFA17673, ALFA12244** |
| **Address** | Thermo Fisher Scientific New Zealand Ltd<br>244 Bush Road, Albany,<br>Auckland, New Zealand |
| **Emergency Tel.** | **CHEMTREC®**<br>**09 980 6780 or +64 9 980 6780** |
| **Telephone / Fax Numbers** | Tel: 09 980 6700<br>Fax: 09 980 6788 |
| **E-mail address** | NZinfo@thermofisher.com |

**Recommended Use** Laboratory chemicals.

## Section 2 - Hazard(s) Identification

**Classification under Work Safe New Zealand**

**Not classified as hazardous according to criteria of EPA New Zealand**

**GHS Classification**

**Physical hazards**
Based on available data, the classification criteria are not met

**Health hazards**
Based on available data, the classification criteria are not met

**Environmental hazards**
Based on available data, the classification criteria are not met

**Label Elements** None required

**Other information**
No information available

# Section 3 - Composition and Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| Stearic acid | 57-11-4 | >95 |

# Section 4 - First Aid Measures

**Inhalation** Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration.

**Ingestion** Do NOT induce vomiting. Get medical attention if symptoms occur.

**Skin Contact** Rinse skin with water. Get medical attention if symptoms occur.

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

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

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

**Most important symptoms and effects** No information available.

**Notes to Physician** Treat symptomatically.

# Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media**
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

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

**Hazardous Combustion Products**
Carbon monoxide (CO), Carbon dioxide ($CO_2$).

**Specific Hazards Arising from the Chemical**
Fine dust dispersed in air may ignite. Dust can form an explosive mixture with air. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.
**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**
Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes or clothing.
**Environmental Precautions**
Avoid release to the environment. See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up**
Sweep up and shovel into suitable containers for disposal. Avoid dust formation.
**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. Avoid dust formation.

**Conditions for Safe Storage, Including any Incompatibilities**
Keep containers tightly closed in a dry, cool and well-ventilated place.

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

**Engineering Measures**
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protective equipment**

**Eye Protection** — 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, Nitrile rubber, Neoprene, PVC. | See manufacturers recommendations | - | AS/NZS 2161.1 | (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** — Wear appropriate protective gloves and clothing to prevent skin exposure

**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)
**Recommended half mask:-** Particle filtering: EN149:2001 (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** | White | |
| **Physical State** | Solid | |
| **Odor** | No information available | |
| **Odor Threshold** | No data available | |
| **pH** | Not applicable | |
| **Melting Point/Range** | 67 - 69 °C / 152.6 - 156.2 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | 361 °C / 681.8 °F | @ 760 mmHg |
| **Flash Point** | 196 °C / 384.8 °F | **Method -** No information available |
| **Evaporation Rate** | Not applicable | Solid |
| **Flammability (solid,gas)** | No information available | |
| **Explosion Limits** | No data available | |
| **Vapor Pressure** | 1 mmHg @ 174 °C | |
| **Vapor Density** | Not applicable | Solid |
| **Specific Gravity / Density** | 0.840 | |
| **Bulk Density** | No data available | |
| **Water Solubility** | slightly soluble | |
| **Solubility in other solvents** | No information available | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Autoignition Temperature** | 395 - °C / 743 - °F | |
| **Decomposition Temperature** | No data available | |
| **Viscosity** | Not applicable | Solid |
| **Explosive Properties** | No information available | |
| **Oxidizing Properties** | No information available | |

**Other information**

| | |
|---|---|
| **Molecular Formula** | C18 H36 O2 |
| **Molecular Weight** | 284.47 |

# Section 10 - Stability and Reactivity

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

**Stability** Stable under normal conditions.

**Conditions to Avoid** Avoid dust formation, Incompatible products, Excess heat.

**Incompatible Materials** Combustible material, Bases, Strong oxidizing agents, Reducing Agent.

**Hazardous Decomposition Products** Carbon monoxide (CO). Carbon dioxide ($CO_2$).

**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 |
|---|---|---|---|
| Stearic acid | LD50 = 4600 mg/kg ( Rat ) | LD50 > 5 g/kg ( Rabbit ) | |

**(b) skin corrosion/irritation;** Based on available data, the classification criteria are not met

| | |
|---|---|
| **(c) serious eye damage/irritation;** | Based on available data, the classification criteria are not met |
| **(d) respiratory or skin sensitization;** | |
| **Respiratory** | Based on available data, the classification criteria are not met |
| **Skin** | Based on available data, the classification criteria are not met |
| **(e) germ cell mutagenicity;** | Based on available data, the classification criteria are not met |

Mutagenic effects have occurred in humans

| | |
|---|---|
| **(f) carcinogenicity;** | Based on available data, the classification criteria are not met |
| | There are no known carcinogenic chemicals in this product |
| **(g) reproductive toxicity;** | Based on available data, the classification criteria are not met |
| **(h) STOT-single exposure;** | Based on available data, the classification criteria are not met |
| **(i) STOT-repeated exposure;** | Based on available data, the classification criteria are not met |
| **Target Organs** | None known. |
| **(j) aspiration hazard;** | Not applicable<br>Solid |
| **Other Adverse Effects** | The toxicological properties have not been fully investigated. |
| **Symptoms / effects,both acute and delayed** | No information available |

# Section 12 - Ecological Information

| | |
|---|---|
| **Ecotoxicity effects** | . |
| **Persistence and Degradability** | Readily biodegradable |
| **Persistence** | Soluble in 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** | Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations . |

# Section 14 - Transport Information

| | |
|---|---|
| **IMDG/IMO** | Not regulated |

**NZS 5433:2012** 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**

**International Inventories** X = listed

| Component | NZIoC | AICS | EINECS | ELINCS | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stearic acid | X | X | 200-313-4 | - | X | X | - | X | X | X | KE-26333 |

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

# Section 16 - Other Information

**This safety data sheet complies with the requirements of WorkSafe New Zealand Regulations**

**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**
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.

**Creation Date** 02-Jun-2014
**Revision Date** 04-Jul-2020

**Revision Summary** Not applicable.

**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