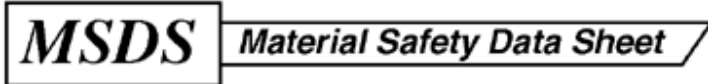


MSDS Number: **S6578** \* \* \* \* \* *Effective Date: 09/08/09* \* \* \* \* \*  
*Supersedes: 05/04/07*



From: Mallinckrodt Baker, Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 613-996-6666

Outside U.S. and Canada  
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

# STEARIC ACID

## 1. Product Identification

**Synonyms:** Octadecanoic acid; 1-heptadecanecarboxylic acid

**CAS No.:** 57-11-4

**Molecular Weight:** 284.48

**Chemical Formula:** CH<sub>3</sub>(CH<sub>2</sub>)<sub>16</sub>COOH

**Product Codes:**

J.T. Baker: 0340

Mallinckrodt: 2025, 2216, 2236, 2237, 3117, 4038, 5223, 8011

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hazardous		
-----	-----	-----
-----		
Stearic Acid	57-11-4	90 - 100%
Yes		

---

### 3. Hazards Identification

#### Emergency Overview

-----

**CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR.**

**SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

-----

---  
Health Rating: 1 - Slight  
Flammability Rating: 2 - Moderate  
Reactivity Rating: 1 - Slight  
Contact Rating: 2 - Moderate  
Lab Protective Equip: GOGGLES; LAB COAT  
Storage Color Code: Green (General Storage)

-----

#### Potential Health Effects

-----

**Inhalation:**

May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, labored breathing, and chest pain.

**Ingestion:**

Large oral doses may cause irritation to the gastrointestinal tract. Ingestion may cause intestinal obstruction.

**Skin Contact:**

May cause irritation with redness and pain.

**Eye Contact:**

May cause irritation, redness and pain.

**Chronic Exposure:**

No adverse health effects expected.

**Aggravation of Pre-existing Conditions:**

No information found.

---

## 4. First Aid Measures

### **Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

### **Ingestion:**

Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

### **Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

### **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

---

## 5. Fire Fighting Measures

### **Fire:**

Flash point: 190C (374F)

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. Melted fatty acid can give "grease" type fire.

### **Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Kst Value (bar.m/s): 159

Minimum Ignition Energy (mJ): < 6 Max Rate of Pressure Rise (bar/s): 929 Pmax: 7.42 bar/gm

### **Fire Extinguishing Media:**

Dry chemical, foam or carbon dioxide. Pressure from the extinguishing media may cause severe dusting. Do not use heavy streams of water, molten material will float on water.

### **Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

---

## 6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

---

## 7. Handling and Storage

Keep in a well closed container stored under cold to warm conditions, 2 to 40 C, (36 to 104F). Protect against physical damage.

Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity. Empty only into inert or non-flammable atmosphere. Emptying contents into a non-inert atmosphere where flammable vapors may be present could cause a flash fire or explosion due to electrostatic discharge.

Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

---

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

- OSHA Permissible Exposure Limit (PEL):

15 mg/m<sup>3</sup> total dust, 5 mg/m<sup>3</sup> respirable fraction for nuisance dusts.

- ACGIH Threshold Limit Value (TLV)

for Particulates (insoluble or poorly soluble) Not Otherwise Specified (PNOS):

3 mg/m<sup>3</sup> respirable particles and 10 mg/m<sup>3</sup> inhalable particles.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up

to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear protective gloves and clean body-covering clothing.

**Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

---

## 9. Physical and Chemical Properties

**Appearance:**

White or yellowish-white powder.

**Odor:**

Odor resembles fats and oils.

**Solubility:**

Insoluble in water.

**Specific Gravity:**

0.94 @ 20C/4C

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

0

**Boiling Point:**

383C (721F)

**Melting Point:**

69 - 70C (156 - 158F)

**Vapor Density (Air=1):**

9.8

**Vapor Pressure (mm Hg):**

1 @ 173.7C (345F)

**Evaporation Rate (BuAc=1):**

No information found.

---

## 10. Stability and Reactivity

### Stability:

Stable under ordinary conditions of use and storage.

### Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

### Hazardous Polymerization:

Will not occur.

### Incompatibilities:

Strong oxidizers, strong bases.

### Conditions to Avoid:

Heat, flame, ignition sources, dusting and incompatibles.

---

## 11. Toxicological Information

Skin rabbit LD50: > 5000 mg/kg; Standard Draize, human skin, 75 mg/3D-I, mild; Standard Draize, rabbit skin, 500 mg/24-hr, moderate; investigated as a tumorigen and mutagen.

-----\Cancer Lists\-----			
Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
-----	-----	-----	-----
Stearic Acid (57-11-4)	No	No	None

---

## 12. Ecological Information

### Environmental Fate:

When released into the soil, this material is expected to readily biodegrade. When released into water, this material is expected to readily biodegrade.

### Environmental Toxicity:

No information found.

---

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

Not regulated.

## 15. Regulatory Information

```

-----\Chemical Inventory Status - Part 1\-----
--
Ingredient                                TSCA  EC   Japan
Australia
-----
-
Stearic Acid (57-11-4)                    Yes  Yes  Yes   Yes

```

```

-----\Chemical Inventory Status - Part 2\-----
--
Ingredient                                Korea  DSL   NDSL  Phil.
-----
Stearic Acid (57-11-4)                    Yes   Yes   No    Yes

```

```

-----\Federal, State & International Regulations - Part 1\-----
--
--
--SARA 302-   -----SARA 313-----
--
Ingredient                                RQ    TPQ   List  Chemical
Catg.
-----
--
Stearic Acid (57-11-4)                    No    No    No    No

```

```

-----\Federal, State & International Regulations - Part 2\-----
--
--
--RCRA-      -TSCA-
Ingredient                                CERCLA  261.33  8(d)
-----
Stearic Acid (57-11-4)                    No      No      No

```

Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No  
SARA 311/312: Acute: Yes      Chronic: No      Fire: Yes      Pressure: No  
Reactivity: No      (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

---

## 16. Other Information

**NFPA Ratings:** Health: **1** Flammability: **1** Reactivity: **0**

**Label Hazard Warning:**

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR.

**Label Precautions:**

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Avoid dust cloud in presence of an ignition source.

**Label First Aid:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No Changes.

**Disclaimer:**

\*\*\*\*\*  
\*\*\*\*\*

**Mallinckrodt Baker, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT BAKER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES,**



**EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.**

\*\*\*\*\*  
\*\*\*\*\*

**Prepared by:** Environmental Health & Safety  
Phone Number: (314) 654-1600 (U.S.A.)