

## 【1. Chemical product and company identification】

<b>Chemical substance name:</b>	Fatty acid, C16-C18 (Stearic acid)
<b>Product name:</b>	Daiwax STF Daiwax STFF
<b>Company name:</b>	Dainichi Chemical Industry Co., Ltd.
<b>Address:</b>	7-3-4, Nakaishikiri-cho, Higashiosaka-shi, Osaka-fu, 579-8014, Japan
<b>Associated department:</b>	Technical department
<b>Telephone number:</b>	+81-72-985-1851
<b>Emergency contact number:</b>	+81-72-985-1851
<b>FAX number:</b>	+81-72-987-0170
<b>Recommended use:</b>	Additives for resin

## 【2. Hazards identification】

### 1. GHS classification

#### a. Physical hazards

#### b. Health hazards

<b>Acute toxicity (oral):</b>	Not applicable
<b>Acute toxicity (dermal):</b>	Not applicable
<b>Acute toxicity (gases):</b>	Not classified
<b>Acute toxicity (vapors):</b>	Classification not possible
<b>Acute toxicity (dusts and mists):</b>	Classification not possible
<b>Skin corrosion/irritation:</b>	Classification not possible
<b>Serious eye damage / eye irritation:</b>	Classification not possible
<b>Respiratory sensitization:</b>	Classification not possible
<b>Skin sensitization:</b>	Classification not possible
<b>Germ cell mutagenicity:</b>	Classification not possible
<b>Carcinogenicity:</b>	Classification not possible
<b>Reproductive toxicity:</b>	Classification not possible
<b>STOT-single exposure:</b>	Classification not possible
<b>STOT-repeated exposure:</b>	Classification not possible
<b>Aspiration hazard:</b>	Classification not possible

# Safety Data Sheet

## c. Environmental hazards

Acute aquatic hazard:	Classification not possible
Chronic aquatic hazard:	Classification not possible
Hazardous to the ozone layer:	Not applicable

## 2. Label elements

Signal words:	Not available
Hazard pictogram:	Not available
Hazard statement	Not available
Precautionary statement	Not available

## 【3. Composition/Information on ingredients】

Substance/Mixture:	Substance(UVCB)
Chemical substance name:	Fatty acid, C16-C18 (Stearic acid)
CAS number:	67701-03-5 (57-11-4)
ENCS number:	Not available ((2)-609, (2)-608)
EINECS number:	266-928-5 (200-313-4)
KECL number:	KE-14228 (KE-26333)

## 【4. First-aid measures】

**IN EACH CASES OF FOLLOWING EMERGENCIES, VICTIMS SHOULD BE TREATED BY PARTICULAR FIRST-AID MEASURES AS FOLLOW**

<b>In eyes:</b>	Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical advice.
<b>On skin:</b>	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical advice, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.
<b>Inhalation:</b>	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical advice.
<b>Ingestion:</b>	If large amount is swallowed, get medical advice.

## 【5. Fire-fighting measures】

<b>Suitable Extinguishing media:</b>	Water spray, foam-extinguisher, powder-extinguisher and dry chemical
<b>Inappropriate extinguishing media:</b>	Straight stream water
<b>Flammable properties:</b>	Slight fire hazard. Dust/air mixtures may ignite or explode.

**Special protective actions for fire-fighters:**

Take away a product container from a fire if possible.  
Keep containers cool with a plenty of water after fire extinction.  
Fire-fighters should wear an appropriate respiratory apparatus and protective clothes for chemical.

## **【6. Accidental release measures 】**

**Personal precautions:**

Use proper protective equipment as indicated in Section 8.  
Avoid direct contact with the spilled or leaked material.  
Avoid inhaling this product in the air (Powder dust).

**Methods and materials for containment and cleaning up:**

Rake spills with a broom and collect it in appropriate container.  
Store the container in a cool and dry place until it disposes.  
Ventilate the area where this product was released.

**Environmental precautions:**

Avoid flowing out to the rivers, household drains and other environment.

## **【7. Handling and storage 】**

**Handling:**

Avoid contact with eyes, skin and clothes.  
Wash hands carefully after handling this product.  
Prohibit open flames while handling this product.  
Avoid deposition of this product.  
Use dust explosion-proof electrical equipment and light fixtures.  
Do not eat, drink or smoke while handling this product.

**Storage:**

Store this product in well-ventilated, dry and cool place.  
Please make sure that the storage is not close to open flames, sparks and heat.  
Please make sure that the container of this product is tightly closed when store this product.

## **【8. Exposure controls/Personal protection 】**

**Component Exposure Limit**

ACGIH, NIOSH, EU, OSHA (US) and other organizations have not developed exposure limits for any of this product's components.

**Engineering controls:**

Eye washer and safety shower should be placed in storages where this product is stored and in buildings where this product is handled.

**Ventilation:**

Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

## Personal protective equipment

<b>Hands:</b>	Wear appropriate protective gloves.
<b>Eyes:</b>	Wear appropriate safety glasses.
<b>Skin and Body:</b>	Wear appropriate protective clothes.
<b>Respiratory:</b>	Wear air-purifying respirator with a tight-fitting facepiece and a high-efficiency particular filter.

## 【9. Physical and chemical properties】

<b>Appearance:</b>	White solid (powder)
<b>Odor:</b>	No data available
<b>Odor threshold:</b>	No data available
<b>pH:</b>	No data available
<b>Melting point and freezing point:</b>	65 - 75°C
<b>Initial boiling point and boiling range:</b>	No data available
<b>Flash point (Open cup):</b>	>196.1°C (>385°F)
<b>Evaporation rate (Butyl acetate =1):</b>	No data available
<b>Flammability (solids, gas):</b>	No data available
<b>Explosive limits:</b>	No data available
<b>Vapor pressure:</b>	No data available
<b>Vapor density (Air =1):</b>	No data available
<b>Specific gravity or density:</b>	No data available
<b>Solubility:</b>	Insoluble in water. Soluble in organic solvents.
<b>Partition coefficient: n-octanol/water:</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	No data available

## 【10. Stability and reactivity】

<b>Reactivity:</b>	Not in particular.
<b>Chemical stability:</b>	Stable in general condition.
<b>Conditions to avoid:</b>	Avoid contact with incompatible materials. Avoid heat, flames, sparks and other sources of ignition. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc.
<b>Incompatible materials:</b>	Oxidizing materials
<b>Hazardous decomposition product:</b>	Oxides of carbon
<b>Possibility of hazardous reactions:</b>	
<b>Heating or combustion reaction:</b>	Hazardous This product will form hazardous fume of carbon monoxide on heating or burning.

## 【11. Toxicological information】

<b>Acute toxicity (Oral):</b>	Stearic acid Based on ChemADVISOR (2015), Oral Rat LD50 is larger than 4600 mg/kg, therefore classified as "Not classified".
-------------------------------	---

# Safety Data Sheet

**Acute toxicity (Dermal):**

Stearic acid

Based on ChemADVISOR (2015), Skin Rabbit LD50 is larger than 5000 mg/kg, therefore classified as "Not classified".

**Acute toxicity (Gases):**

Not applicable

**Acute toxicity (Vapors):**

Not applicable

**Acute toxicity (Dusts and mists):**

No data available

**Skin corrosion/irritation:**

Stearic acid

Based on ChemADVISOR (2015), following two endpoints are published:

75 mg/3 days intermittent Skin Human mild

500 mg/24 hour Skin Rabbit moderate

**Serious eye damage / Eye irritation:**

No data available

**Respiratory sensitization:**

No data available

**Skin sensitization:**

No data available

**Germ cell mutagenicity:**

Stearic acid

Based on ChemADVISOR (2015), RTECS publishes the following endpoint:

10 mg/L/20 hour human

**Carcinogenicity:**

Stearic acid

Based on ChemADVISOR (2015), RTECS publishes the following endpoint:

400 mg/kg Implant Mouse TDLo

**Reproductive toxicity:**

No data available

**STOT-single exposure:**

No data available

**STOT-repeated exposure:**

No data available

**Aspiration hazard:**

No data available

**Component analysis - LD50/LC50:**

Oral LD50 Rat > 46000mg/kg

Dermal LD50 Rat > 5000mg/kg

**Inhalation (Dust)**

**Acute exposure:**

Stearic acid

Inhalation of dust may cause irritation of the nose and throat, coughing or difficulty in breathing.

**Chronic exposure:**

No data available

**Skin contact**

**Acute exposure:**

Stearic acid

Contact with the solid may cause irritation.

Application to rabbit skin resulted in moderate irritation.

**Chronic exposure:**

Stearic acid

Neither a 7% solution in petrolatum for 48 hours in a closed patch test nor a 1.0 M solution in propanol applied daily for 10 days produced irritation.

**Eye contact**

**Acute exposure:**

Stearic acid

May cause mild irritation

**Chronic exposure:**

No data available

## Ingestion

### Acute exposure:

#### Stearic acid

Ingestion of large amounts may result in intestinal obstruction.

### Chronic exposure:

#### Stearic acid

Weanling mice fed diets containing 5-50% of the substance as the monoglyceride for 3 weeks had depression of weight gain above the 10% dietary level. Mortality occurred only with the 50% diet. Another study reveals rats fed 5% stearic acid as part of a high fat diet for 6 weeks, or 6% for 9 weeks, showed a decreased blood clotting time and hyperlipemia. No significant pathological lesions were observed in rats fed 3000 ppm (0.3%) of the substance for about 30 weeks, but anorexia, increased mortality, and greater incidence of pulmonary infection were observed.

## 【12. Ecological information】

### Ecotoxicity

#### Aquatic ecotoxicity:

No data available

#### Terrestrial ecotoxicity:

No data available

### Persistence and degradability:

No data available

### Bioaccumulative potential:

No data available

### Mobility in soil:

No data available

### Hazardous to the ozone layer:

No data available

## 【13. Disposal considerations】

Do NOT dump this product in the environment or in the household waste. Before disposal or incineration, contents of this product should be neutralized or stabilized if it's possible.

Obey local/regional/national/international regulations about the disposal or the incineration of this product (both contents and containers).

## 【14. Transport information】

### UN number:

Not Applicable on UN classification

### HS code:

2915.70

### US DOT:

No classification assigned

### TDG:

No classification assigned

### ADR:

No classification assigned

### RID:

No classification assigned

### IATA:

No classification assigned

### ICAO:

No classification assigned

### IMDG:

No classification assigned

### Marine pollutant:

Not applicable

### Particular safety measures for transportation:

Avoid damage to the container while loading this product.  
Do not put heavy objects on top of this product.  
Load carefully to prevent the collapse of cargo.  
Avoid direct sunlight to this product during transport.

## 【15. Regulatory information】

### Inventory information

Inventory Name	Fatty acid, C16-C18		Stearic acid	
	Status	Registry Number	Status	Registry Number
AICS (Australia):	Present	—	Present	—
DSL (Canada):	Present	—	Present	—
IECSC (China):	Present	41693	Present	40948
EINECS (EU):	Present	266-928-5	Present	200-313-4
ENCS (Japan):	Unlisted	—	Present	(2)-608, (2)-609
KECL (Korea):	Present	KE-14228	Present	KE-26333
INSQ (Mexico):	Present	—	Present	—
NZIoC (New Zealand):	Present	HER003930	Present	—
PICCS (Philippines):	Present	—	Present	—
TCSI (Taiwan):	Present	—	Present	—
Inventory (Turkey):	Present	EC No. 266-928-5	Present	EC No. 200-313-4
TSCA (U.S.A.):	Present	—	Present	—

## 【16. Other Information】

### References

- 1 ChemADVISOR, Inc. (2015). *Fatty acids, C16-C18* [Data file]. Retrieved from LOLI database.
- 2 ChemADVISOR, Inc. (2015). *Stearic acid* [Data file]. Retrieved from LOLI database.
- 3 Japan Chemical Database Ltd. (2015). *Fatty acid, C16-C18* [Data file]. Retrieved from ezADVANCE database.
- 4 Japan Chemical Database Ltd. (2015). *Stearic acid* [Data file]. Retrieved from ezADVANCE database.
- 5 National Institute of Technology and Evaluation (NITE). (2006). *Fatty acid, C16-C18* [Data file].
- 6 National Institute of Technology and Evaluation (NITE). (2006). *Stearic acid* [Data file].
- 7 United Nations. (2013). *Globally Harmonized System of Classification and Labelling of Chemicals (GHS)* (5th ed.). (The Japanese GHS Inter-ministerial Committee, Trans.). Tokyo: The Chemical Daily Co., Ltd..

## Key/ Legend

ACGIH - American Conference of Governmental Industrial Hygienists  
AICS - Australia Inventory of Chemical Substances  
ADR - European Road Transport  
°C - degree Celsius  
EINECS - European Inventory of Existing Commercial Chemical Substances (European Union)  
ENCS - Existing and New Chemical Substances (Japan)  
GHS - Globally Harmonized System of Classification and Labelling of Chemicals  
HPV - High Production Volume  
IATA - International Air Transport Association  
ICAO - International Civil Aviation Organization  
IECSC - Inventory of Existing Chemical Substances (China)  
IMDG - International Maritime Dangerous Goods  
INSQ - National Inventory of Chemical Substances (Mexico)  
IUCLID - International Uniform Chemical Information Database  
KECL - Korea Existing Chemicals Inventory  
LD50 - Lethal Dose, 50% or Median Lethal Dose  
LOLI - List Of Lists™-ChemADVISOR's Regulatory Database  
NZIoC - New Zealand Inventory of Chemicals  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
RTECS - Registry of Toxic Effects of Chemical Substances®  
STOT - Specific Target Organ Toxicity  
TDG - Transportation of Dangerous Goods  
TSCA - Toxic Substances Control Act (U.S.A.)  
UN - United Nations  
CAS - Chemical Abstracts Service  
DSL - Domestic Substances List  
HS code - Harmonized System code  
NITE - National Institute of Technology and Evaluation  
RID - European Rail Transport  
TCSI - Taiwan Chemical Substance Inventory  
TLV - Threshold Limit Value  
TWA - Time Weighted Average  
US DOT - United States Department of Transportation

### ***Manufacture disclaimer***

*All information given in this SDS is based on the data which is considered to be accurate, but the information do not guarantee enough safety. All chemical material may have an unknown hazard to human and conditions of methods of handling, storage, use and disposal of the product are beyond suppliers' control; therefore all risks and consequences of use the product are on users' responsibilities and users need to set appropriate safety measures for special use.*

*In addition, all classification in this SDS was written in accordance with the GHS classification of the fifth revised edition. However, GHS mentioned that countries are free to determine which of the building blocks will be applied in different parts of label elements and building blocks. Therefore, many countries set own requirements of label elements and building blocks. In the cases of export from Japan or use in other countries, SDSs and labels are needed, which are in accordance with the local laws and regulations of exporting countries or user countries. Please contact supplier beforehand for checking SDSs and labels are suitable for the local laws and regulations.*