



## VVF Limited

Address: 109, Sion (East), Mumbai 400 022, India  
 Telephone: 91-22-40282000; Fax: 91-22-24073771  
 Website: www.vvfltd.com; E-mail: [doy@vvfltd.com](mailto:doy@vvfltd.com)

### MATERIAL SAFETY DATA SHEET

Product Name: Stearic Acid 90	Version: 1.01	Date: May 25, 2009
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#### **1. CHEMICAL PRODUCT IDENTIFICATION**

1.1 Product Name	Stearic Acid
1.2 Common Chemical Name	Mix of Octadecanoic Acid, Hexadecanoic Acid and 9-Octadecenoic Acid
1.3 Product Code (Supplier)	Stearic 90

#### **2. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Blend of Following Acids</u>	<u>CAS Number</u>	<u>EINECS Number</u>	<u>% by Weight</u>
1. Hexadecanoic Acid	57-10-3	200-312-9	5-16
2. Octadecanoic Acid	57-11-4	200-313-4	70 Min
3. 9-Octadecenoic Acid	112-80-1	204-007-1	2.0 Max

#### **3. HAZARD IDENTIFICATION**

3.1 European Hazard Classification	No EC symbols or R phrases applicable
3.2 Environmental Hazards	None identified
3.3 Human Health Hazards, Effects, and Symptoms:	
a. Ingestion	May cause slight irritation to gastrointestinal tract
b. Inhalation	No harmful effect expected at ambient temperature. Mist or dust could cause irritation to pulmonary tract
c. Skin Contact	Mild irritant. Molten product can cause burns on contact
d. Eye Contact	Mild transient irritant

#### **4. FIRST AID MEASURES**

4.1 Ingestion	Consult a doctor immediately. Drink plenty of water. Do not induce vomiting. However, if the person is unconscious, do not provide any type of ingestion
4.2 Inhalation	Remove to fresh air immediately. In case of breathing difficulty try artificial respiration. Get medical attention as soon as possible
4.3 Skin Contact	Wash material off the skin with plenty of soap and water. If redness or itching persist seek medical attention
4.4 Eye Contact	Wash eyes with water for at least 15 minutes. If redness or itching persists, seek medical attention

#### **5. FIRE FIGHTING MEASURES**

5.1 Extinguishing Media	Carbon dioxide, dry chemical, water fog or foam
a. Suitable	Carbon dioxide, foam
b. Not Suitable	Water may be ineffective
c. Special Fire Fighting Procedures	Wear self-contained breathing apparatus, and protective clothing to avoid direct contact with



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<b>5. FIRE FIGHTING MEASURES</b>	
	eyes and skin. Cool tank using a water jet in case of high temperature or fire
5.2 Unusual Fire or Explosion Hazards	None
5.3 Hazardous Thermal Decomposition	On decomposition the product releases carbon dioxide, carbon monoxide, hydrocarbons, soot, aldehydes and ketones
5.4 Protection for Fire-Fighters	Self contained breathing apparatus, protective clothing and a face mask

<b>6. ACCIDENTAL RELEASE MEASURES</b>	
6.1 Personal Precautions	No stringent special precaution. Follow standard industry measures
6.2 Environmental Precautions	In case of spillage soak up with sand or soil and dispose. Prevent entry of product into drains and ground water
6.3 Clean Up Method	Collect in dry earth or sand. Transfer to container for disposal. Wash area with water. Observe local laws

<b>7. HANDLING AND STORAGE</b>	
7.1 Handling	Follow good hygiene and safety procedures. Avoid any direct contact. Wash with soap after handling. Keep away from heat, strong acids and oxidising agents
7.2 Storage	Keep sealed containers, cool and dry place away from heat sources
7.3 Suitable Packing Materials	HDPE carbuoys, stainless steel tanks or lacquer - lined MS drums
7.4 Unsuitable Packing Material	Unlined MS drums

<b>8. EXPOSURE CONTROLS / PERSONAL PROTECTION</b>	
8.1 Ventilation / Engineering Controls	Use adequate ventilation to keep airborne concentration low. Avoid inhalation of vapours
8.2 Respiratory System Protection	None required when adequate ventilation is available at ambient temperature. In presence of mist or vapours, use self contained NIOSH/MSHA approved respirator
8.3 Skin and Body Protection	Use uniform, apron and rubber boots
8.4 Hand Protection	Rubber gloves
8.5 Eye Protection	Use safety goggles or face mask
8.6 Other Protective Equipment	Eye wash, safety shower, protective clothing

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>	
9.1 Physical State	Solid at 35 <sup>0</sup> C
9.2 Colour	White
9.3 Odour	Characteristic fatty odour
9.4 Boiling Point,	299 <sup>0</sup> C 128 mm of Hg
9.5 Melting Range	70-80 <sup>0</sup> C



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<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>	
9.6 Solubility Water	Insoluble in water
9.7 Density, Gm/ml	0.83 at 75 <sup>0</sup> C
9.7 Solubility Oil and Solvents	Soluble in solvents
9.8 Vapour Density (Air=1)	9.8
9.9 Vapour Pressure, mm of Hg	1 mm at 174 <sup>0</sup> C
9.10 Flash Point	200 <sup>0</sup> C PMCC
9.11 Auto Ignition Temperature	400 <sup>0</sup> C
9.12 Lower Explosion Limit	Not available
9.13 Upper Explosion Limit	Not available
9.14. Average Molecular Weight	Approximately 282.0
9.15. Viscosity	Not available

<b>10. STABILITY AND REACTIVITY</b>	
10.1 Chemical Stability	Stable under normal operational conditions
10.2 Conditions to Avoid	Sources of heat, ignition and flame
10.3 Materials to Avoid	Strong acids and oxidising agents
10.4 Hazardous Polymerisation Products	None
10.5 Hazardous Decomposition Products	Carbon monoxide and carbon dioxide

<b>11. TOXICOLOGICAL INFORMATION</b>	
11.1 Acute Toxicity	Not detected
a. Oral (LD50) (Rat)	> 10 grams/Kg
b. Dermal (LD50) (Rabbit)	> 5 grams /Kg
c. Inhalation (LC50)	Not available
d. Skin Irritation	Slight irritation
e. Eye Irritation	Slight irritation
f. Sensitisation	Not reported
g. Chronic Toxicity	Not reported
h. Carcinogenicity	Not reported

<b>12. ECOLOGICAL INFORMATION</b>	
12.1 Comment	This product is very easily biodegradable (90%) and does not cause difficulties in waste water treatments plants. Being water insoluble and lighter than water, large amounts of contamination can be separated using typical standard oil/fats separators
12.2 Eco-Toxicity	Data not available

<b>13. DISPOSAL CONSIDERATIONS</b>	
13.1 Methods of Disposal	Reprocess or dispose off in accordance with local, state and federal regulation in an approved area

<b>14. TRANSPORT INFORMATION</b>	
14.1 UN Number	Not listed
14.2 Land Road / Railway	
14.21 ADR/RID Class	Chemicals N. O. S. (non regulated)



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14.22 ADR/RID Item Number	Chemicals N. O. S. (non regulated)
14.3 Inland Waterways	
14.31 ADNR Class	Chemicals N. O. S. (non regulated)
14.4 Sea	
14.41 IMDG Class	Chemicals N. O. S. (non regulated)
14.42 IMDG Page Number	
14.5 Air	
14.51 IATA-DGR Class	Chemicals N. O. S. (non regulated)
14.6 National Transport Regulations	Chemicals N. O. S. (non regulated)

**15. REGULATORY INFORMATION**

15.1 EEC Regulations	This product has been classified in accordance with the hazard criteria of the controlled product regulation
15.2 Inventory Status	TSCA, AICS, DSL, IECSE, EINECS, ENCS, KECI, PICCS
15.2 Others	According to available data, the product is not regulated. However, one should observe prescribed federal, state and local measures while dealing with chemicals

**16. OTHER INFORMATION**

16.1 REACH Pre-Registration Number	Palmitic (C16) Acid	05-2116454379-34-0000
	Stearic (C18) Acid	05-2116454380-51-0000
	Oleic (C18:1) Acid	05-2116454374-44-0000
16.2 Legend	Not applicable; not available	
16.3 History:		
a. Date of First issue	July 20, 2004	
b. Date of Last issue	July 20, 2004	
c. Date of Current issue	May 25, 2009	Version: 1.01
MSDS Prepared by	Mr. C.R. Marathe	
MSDS Authorised By	Dr. Kashinath Pandit	

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