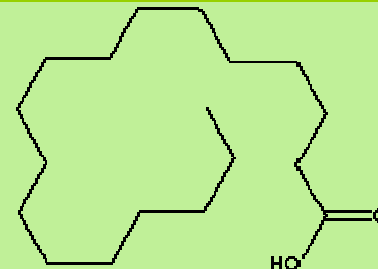


STEARIC ACID

PRODUCT IDENTIFICATION

CAS NO.	57-11-4
EINECS NO.	200-313-4
FORMULA	CH ₃ (CH ₂) ₁₆ COOH
MOL WT.	284.48
H.S. CODE	2915.70.0120
SMILES	C(CCCCCCCCCC)CCCCC(=O)O
TOXICITY	



SYNONYMS n-Octadecanoate; 1-Heptadecanecarboxylic acid; n-Octadecylic acid; Cetylacetic acid; Acide octadecylique; Acide stearique; Stearophanic acid; Octadecanoic acid; Other CAS RN: 8013-28-3, 8023-06-1, 8037-83-0, 8037-40-9, 8039-54-1, 8039-53-0, 8039-52-9, 8039-51-8, 39390-61-9, 58392-66-8, 82497-27-6, 134503-33-6, 197923-10-7, 294203-07-9

EXTRA NOTES EPA Pesticide Chemical Code 079082, FEMA No. 3035
CLASSIFICATION Fatty Acid

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	White to yellowish solid
MELTING POINT	67 - 69 C
BOILING POINT	361
SPECIFIC GRAVITY	0.94
SOLUBILITY IN WATER	0.1-1 g/100 ml at 23 C
OH RATE	2.25E-11 (cm ³ /molecule-sec at 25 C Atmospheric)
VAPOR DENSITY	9.8
HENRY LAW CONSTANT	4.76E-07 (atm-m ³ /mole at 25 C) Constant
NFPA RATINGS	Health: 1 Flammability: 1 Reactivity: 0
REFRACTIVE INDEX	
FLASH POINT	196 C
STABILITY	Stable under ordinary conditions

EXTERNAL LINKS & GENERAL DESCRIPTION

GENERAL DESCRIPTION: Fatty Acids are aliphatic carboxylic acid with varying hydrocarbon lengths at one end of the chain joined to terminal carboxyl (-COOH) group at the other end. The general formula is R-(CH₂)_n-COOH. Fatty acids are predominantly unbranched and those with even numbers of carbon atoms between 12 and 22 carbons long react with glycerol to form lipids (fat-soluble components of living cells) in plants, animals, and microorganisms. Fatty acids all have common names respectively lauric (C12), myristic (C14), palmitic (C16), stearic (C18), oleic (C18, unsaturated), and linoleic (C18, polyunsaturated) acids. The saturated fatty acids have no double bonds, while oleic acid is an unsaturated fatty acid has one double bond (also described as olefinic) and polyunsaturated fatty acids like linolenic acid contain two or more double bonds. Lauric acid (also called Dodecanoic acid) is the main acid in coconut oil (45 - 50 percent) and palm kernel oil (45 - 55 percent). Nutmeg butter is rich in myristic acid (also called Tetradecanoic acid) which constitutes 60-75 percent of the fatty-acid content. Palmitic acid(also called Hexadecylic acid) constitutes between 20 and 30 percent of most animal fats and is also an important constituent of most vegetable fats (35 - 45 percent of palm oil). Stearic acid (also called Octadecanoic Acid) is nature's most common long-chain fatty acids, derived from animal and vegetable fats. It is widely used as a lubricant and as an additive in industrial preparations. It is used

in the manufacture of metallic stearates, pharmaceuticals, soaps, cosmetics, and food packaging. It is also used as a softener, accelerator activator and dispersing agent in rubbers. Oleic acid (systematic chemical name is cis-octadec-9-enoic acid) is the most abundant of the unsaturated fatty acids in nature. Stearic Acid is widely used as a lubricant and as an additive in industrial preparations. It is used in the manufacture of metallic stearates, pharmaceuticals, soaps, cosmetics, and food packaging. It is also used as a softener, accelerator activator and dispersing agent in rubbers.

SALES SPECIFICATION

PALM OIL ACID (HARDENED)

APPEARANCE	Bead
IODINE VALUE	0.5 max
ACID VALUE	208 - 210
SAP VALUE	209 - 211
TITER	54 - 56 C
COLOR	0.5 R / 2.5 Y
CARBON DISTRIBUTION	C14 (1% max) + C16 (62% max) + C18 (45% max)

TRANSPORTATION

PACKING	25kgs in bag , 17mts in Container
HAZARD CLASS	Not regulated
UN NO.	

GENERAL DESCRIPTION OF FAT

Commercial fats produced by organic processes in plants are palm, coconut, palm kernel, sunflower, soybean, and other oils. Their main components are triolein and triglyceryl esters of stearic (C18), palmitic (C16), myristic (C14), lauric (C12), oleic (C18:1), and other fatty acids. Tallow is a refined hard fat extracted from fatty deposits of animals, especially from suet (fatty tissues around the kidneys of cattle and sheep). The molecules of most natural fatty acids have an even number of carbon chains due to the linkage together by ester units. Analogous compounds of odd numbers carbon chain fatty acids can be made synthetically. All fats are insoluble in water and have lighter weight than water. Industrial fats can be sub-classified as fat, grease or oil depending on melting point. Fats that are liquid at room temperature are referred to oil. Grease has a higher initial viscosity than oil. It is used as a lubricant. The organic processes to convert fats to fatty acids (or esters) and glycerol is called oleochemistry. Fatty acids and glycerol are produced by hydrolysis (addition reaction of water molecule with cleavage of parent molecules) of the triglycerides. Fatty esters are produced by esterification reaction. Coconut or palm oils are better source to get saturated fatty acids than sunflower, soybean or rapeseed oils which have more unsaturated fatty acids composition of triglycerides. Tall oil fatty acid (TOFA) is a low cost unsaturated fatty acid (oleic acid) and is a source of low boiling point fatty acids. It is an alternative to tallow fatty acid in soap applications. Generally, commercial coconut fatty acid has carbon chain composition of; C10 (5% max) + C12 (45 - 55%) + C14 (20 - 25%) + C16 (10 - 15 %) + C18 (10 - 15% max, including unsaturated fatty acids). Fats are used to make soap, food products, cosmetics, and candles, and lubricants. They are wisely used in producing synthetic surfactants.