

Stearic Acid

CAS 57-11-4 · $C_{18}H_{36}O_2 - CH_3$ · Triple pressed, 40/50/60 grades

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1. Product identity

Product name	Stearic Acid
Synonyms	stearic acid triple pressed, octadecanoic acid, stearic powder, stearic acid 40/50/60
C.A.S. number	57-11-4 (stearic acid / octadecanoic acid - the CAS for the acid itself; EC 200-313-4). Commercial triple-pressed material is a MIXTURE and is normally additionally declared under CAS 67701-03-5 (fatty acids, C16-18), with palmitic acid CAS 57-10-3 as the principal co-component and myristic acid CAS 544-63-8 present at low level.
Molecular formula	$C_{18}H_{36}O_2 - CH_3(CH_2)_{16}COOH$ (stearic acid). Palmitic acid, the main co-component, is $C_{16}H_{32}O_2$.
Molecular weight	284.5 for stearic acid itself (ILO ICSC 0568). A commercial 40, 50 or 60 grade is a fatty-acid mixture and has no single molecular weight; palmitic acid is 256.4.
Grade supplied against	Triple pressed, 40/50/60 grades
Appearance	White to pale cream waxy flakes, beads, prills, powder or crystals with a slight characteristic fatty or tallow-like odour
Product group	Surfactants & Oleochemicals
HSN code	3823 11 00
Country of origin	As stated on the producer's documents for the lot supplied; confirmed at offer stage
Packing	25 kg bag
Storage	Store in closed original bags, cartons or containers in a cool, dry, well-ventilated place away from heat, ignition sources, oxidisers and strong-smelling materials. Keep below about 30 C - flakes and beads soften, block and cake above that, and the product picks up odour readily. Where it is handled as a powder, apply combustible-dust precautions: earthing and bonding, dust extraction, no accumulation of settled layers, and no ignition sources. If it is held molten, keep the melt only a little above its melting point and limit exposure to air and to prolonged high temperature, both of which darken the product and raise the acid value; use stainless steel melt lines, and treat all hot lines and valves as burn hazards with guarding and PPE.

2. Analytical specification

S. No.	Test parameter	Specification	Method
1	Description	White to pale cream waxy flakes, beads, prills, powder or crystals with a slight characteristic fatty or tallow-like odour	Visual
2	Identification	Conforms to the substance supplied	Instrumental or chemical test, per method agreed
3	Assay / grade	Triple pressed, 40/50/60 grades	Titrimetry or instrumental, per method agreed

S. No.	Test parameter	Specification	Method
4	Physical state	Solid at ambient temperature; often handled molten	Visual
5	Solubility in water	Practically insoluble in water - about 0.00005 g/L at 20 C (ILO ICSC 0568 states 'none'). Soluble in ethanol, chloroform, diethyl ether and hot organic solvents. It saponifies in aqueous alkali to form soluble soaps.	Per the test method agreed
6	pH	Not applicable - the product is practically insoluble in water, so no meaningful aqueous pH exists and producer SDSs record 'no data available'. Quality for this product is specified by ACID VALUE, saponification value, iodine value, titre (solidification point) and colour, not by pH. If a customer's specification sheet demands a pH, the correct answer is that it is not applicable, not an invented number.	Potentiometry on an aqueous suspension
7	Relative density	About 0.84-0.94 g/cm ³ . ILO ICSC 0568 gives relative density 0.94-0.83 (the range reflecting solid versus molten); producer data 0.90 g/cm ³ for the solid and 0.85 g/mL at 75 C for the melt. Quote the temperature with any density figure for this product.	Pyknometry or gas displacement
8	Melting / freezing point	69-72 C for pure stearic acid (ILO ICSC 0568). Commercial grades melt LOWER and over a range because of their palmitic acid content: producer data for triple-pressed grades gives 55-60 C and 62.5 C on different sheets. Use the melting range on your own certificate of analysis for the specific grade, not the pure-substance figure.	Thermal analysis
9	Boiling point	Above 300 C (producer data; one sheet gives 351.5 C for the palmitic component). It decomposes near its boiling point, so this figure has no practical processing use.	Distillation range
10	Flash point	196 C closed cup (ILO ICSC 0568). Producer sheets for triple-pressed grades give above 200 C and 205 C. Auto-ignition temperature 395 C (ILO ICSC 0568); one producer sheet conservatively states above 250 C. The material is combustible but not flammable, and the dominant fire hazard is dust, not vapour.	Not applicable — the substance is not combustible
11	Additional parameters	To the specification agreed before order	As agreed

3. Transport classification

Not regulated for transport · Class Not applicable - not a dangerous good under ADR, IMDG, IATA, DOT or TDG, whether solid or in heated/molten bulk · Packing group Not applicable

Proper shipping name: Not applicable - not regulated for transport

What this document is. This is a product specification sheet. It states the grade this material is supplied against, its packing and its identity. **It is not a certificate of analysis, it carries no test results, and it certifies no batch.** Tested values for the consignment actually loaded appear on the batch certificate of analysis issued against that batch, which travels with the despatch documents. Identity and physical data are drawn from PubChem, the ECHA CLP inventory and ILO safety cards; the producer's documents for the grade quoted govern. Velora Chemicals Private Limited is a bulk supplier and trader, not a manufacturer.