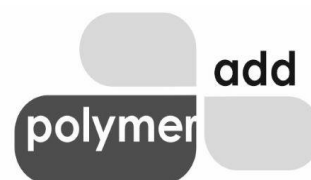


Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalaremprikiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250
Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280
Mobile - Thai : 0804531391, English: 0839415475, E-mail – contact@polymeradd.co.th



GM-90 TECHNICAL DATA SHEET

Chemical Name	GLYCEROL MONOSTEARATE (GMS) (DISTILLED / 90%)
Grade Name	GM-90
CAS No.	31566-31-1
HS Code	3824.99.96 (varies by region)
EINECS No.	250-705-4
Molecular Formula	C ₂₁ H ₄₂ O ₄
Molecular Weight	358.56 g/mol
Synonyms	GMS, Glyceryl Monostearate, 1-Monostearin, Octadecanoic acid monoester with glycerol

Property | Typical Value / Description | Test Method

Property	Typical Value / Description	Test Method
Appearance	White to off-white powder or flakes	Visual
Odor	Faint, fatty odor	Sensory
pH (5% emulsion)	5.5 – 7.0	pH meter
Moisture Content	≤ 2.0%	Oven drying (105°C)
Monoglyceride Content	≥ 90%	GC / HPLC
Acid Value	≤ 5 mg KOH/g	Titrimetric (AOCS)
Saponification Value	150–165 mg KOH/g	ISO 3657
Iodine Value	≤ 3	ISO 3961
Melting Point	58 – 65 °C	DSC
Solubility	Dispersible in hot water; soluble in ethanol and oils	Visual / Solubility Test
HLB Value (Approx.)	~3.8	Calculated
Bulk Density	0.35 – 0.55 g/cm ³	Tapped Density Method
Particle Size (D50)	15 – 45 µm (grade-dependent)	Laser Diffraction

Heavy Metals (EU Regulation 10/2011 — Content Limits in Additives)

(Food Contact / Additive Use)

Element	Typical Limit	Test Method
Lead (Pb)	≤ 2 ppm	ICP, AAS, XRF
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 0.1 ppm	ICP, CV-AAS
Arsenic (As)	≤ 1 ppm	ICP, AAS
Chromium (VI)	ND	UV-Vis (after extraction)

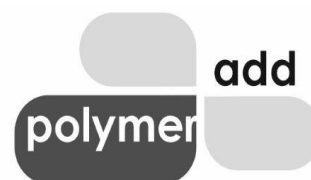
Colour Impacting Impurities

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – contact@polymeradd.co.th



Element	Typical Max Limit (ppm)	Test Method
Iron (Fe)	≤ 30 ppm	ICP, AAS, XRF
Manganese (Mn)	≤ 5 ppm	ICP, AAS, XRF
Copper (Cu)	≤ 3 ppm	ICP, AAS, XRF
Nickel (Ni)	≤ 3 ppm	ICP, AAS, XRF

Product Performance Impacting Ions / Impurities

Ion / Element	Typical Max Limit (ppm)	Test Method
Sodium (Na)	≤ 100 ppm	ICP, AAS
Potassium (K)	≤ 100 ppm	ICP, AAS
Chloride (Cl ⁻)	≤ 150 ppm	Ion Chromatography
Sulfate (SO ₄ ²⁻)	≤ 150 ppm	Ion Chromatography

Disclaimer:

This product is manufactured under general industrial quality standards. While heavy metals and impurities are monitored periodically, testing for each batch is performed only if specified in the order. For food or pharmaceutical use, certification must be requested during order confirmation. Product is not intended for medical implants or prolonged skin/mucosa contact without validation.

USES / APPLICATION

Industry	Commercial Application / Uses (Micronized Grade)
Food	Emulsifier in bakery fats, margarine, dairy powders, and confectionery
Plastics	Internal lubricant and antistatic agent in PVC, PE, and PP compounds
Cosmetics	Emulsifier, opacifier in creams, lotions, and ointments
Pharmaceutical	Coating agent, tablet lubricant, slow-release formulations
Industrial	Mold-release agent, dispersant in plastic additives and masterbatches

US FDA 21 CFR LISTING

CFR Section	Title / Description
184.1324	Glycerol monostearate (GRAS – direct food additive)
178.3620	Emulsifiers and/or surface active agents (food-contact plastics use)
175.105	Adhesives (indirect food additive)

Month of Creation: June 2025

Month of Review: June 2027