

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempakiat, 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



## TECHNICAL DATA SHEET GMS-31566

### PRODUCT CLASSIFICATION

<b>Chemical Name</b>	<b>GLYCEROL MONOSTEARATE (MICRONIZED)</b>
<b>Grade Name</b>	GMS-31566
<b>CAS No.</b>	31566-31-1
<b>HS Code</b>	2915.70.00
<b>EINECS No.</b>	250-705-4
<b>Molecular Formula</b>	$C_{21}H_{42}O_4$
<b>Molecular Weight</b>	~358.56 g/mol
<b>Synonyms</b>	GMS, Glyceryl monostearate, Monostearin, 1-Monooctadecanoyl-rac-glycerol

### PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description
<b>Test Method</b>	Appearance
White to off-white powder	Visual
Odor	Faint fatty or waxy odor
Sensory	pH (5% dispersion)
5.0 – 7.0	pH meter
Acid Value	$\leq 5$ mg KOH/g
Titration	Iodine Value
$\leq 2$	Titration
Saponification Value	150 – 165 mg KOH/g
Titration	Monoester Content
$\geq 90\%$	GC or HPLC
Melting Point	58 – 65 °C
Capillary or DSC	Moisture Content
$\leq 2.0\%$	Oven drying (105 °C)
Bulk Density	0.30 – 0.50 g/cm <sup>3</sup>
Tapped Density	Solubility in Water
Dispersible (forms milky emulsion)	Visual Observation
Particle Size (D50)	6 – 10 $\mu$ m (micronized)
Laser Diffraction	Particle Size (D99)
$< 25 \mu$ m	Laser Diffraction

➤ The commercial product specification may include only a selection of the properties listed above; this additional data is provided for general technical reference.

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## HEAVY METALS (EU REGULATION 10/2011 — CONTENT LIMITS IN ADDITIVES)

Element	Typical Limit	Test Method
Lead (Pb)	≤ 2 ppm	ICP, AAS, XRF
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 1 ppm	ICP, CV-AAS
Arsenic (As)	≤ 1 ppm	ICP, AAS

## USES / APPLICATION

Industry	Commercial Application / Uses (Micronized Grade)
Plastics / Polymers	Internal lubricant, antistatic agent in PE, PP, PVC films and masterbatches
Rubber	Lubricant and dispersion aid in EPDM and NR compounds
Adhesives	Flow modifier and emulsion stabilizer
Inks & Pigments	Wetting agent and dispersant
Coatings	Emulsifier for water-based coatings
Food Packaging	Processing aid (FDA-approved grades only)
Cosmetics	Emollient, emulsifier, and thickener in creams, lotions, and sticks

## US FDA 21 CFR LISTING

CFR Section	Title / Description
184.1324	Glycerol monostearate – GRAS status
175.105	Adhesives – for food contact packaging
177.2600	Rubber articles intended for repeated use
178.3400	Emulsifiers and/or surface-active agents

## COLOUR IMPACTING IMPURITIES

Element	Typical Max Limit (ppm)	Test Method
Iron (Fe)	≤ 100 ppm	ICP, AAS, XRF
Manganese (Mn)	≤ 30 ppm	ICP, AAS, XRF
Chromium (Cr)	≤ 20 ppm	ICP, AAS, XRF
Copper (Cu)	≤ 15 ppm	ICP, AAS, XRF
Nickel (Ni)	≤ 10 ppm	ICP, AAS, XRF

## PRODUCT PERFORMANCE IMPACTING IONS / IMPURITIES

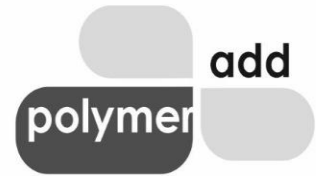
Ion / Element	Typical Max Limit (ppm)	Test Method
Calcium (Ca)	≤ 200 ppm	ICP, AAS, XRF
Magnesium (Mg)	≤ 100 ppm	ICP, AAS, XRF
Sodium (Na)	≤ 100 ppm	ICP, AAS, XRF
Potassium (K)	≤ 100 ppm	ICP, AAS, XRF
Chloride (Cl <sup>-</sup> )	≤ 100 ppm	Ion Chromatography

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Sulfate ( $\text{SO}_4^{2-}$ )	$\leq 100$ ppm	Ion Chromatography
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## Disclaimer:

This product is intended for industrial use. Food-contact suitability must be verified for each batch and application. Not intended for use in medical devices or products with prolonged human contact. Values provided are typical and not binding specifications unless otherwise agreed in writing.

**Month of Creation:** July 2025

**Month of Review:** July 2027

POLYMER ADD