

Polymer Add (Thailand) Co.,Ltd.

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GLYCERYL MONOSTEARATE (GMS) 90% – MICRONISED ANTI-STATIC APPLICATION

1) Brief Introduction to Micronised Grade of GMS 90%

Micronised Glyceryl Monostearate (GMS) 90% is a high-purity mono-glyceride processed into a fine, controlled particle size powder to enhance surface activity and uniform dispersion. When used as an anti-static agent, the micronised grade plays a critical role in reducing surface resistivity and static charge build-up in polymer systems. The reduced particle size enables faster migration to the polymer surface, consistent performance at low dosages, and improved compatibility with thermoplastic processing conditions.

2) Chemical & Physical Information (Micronised Grade)

Parameter	Description
CAS Number	31566-31-1
Chemical Name	Glyceryl Monostearate
Synonyms	GMS, Glycerol Monostearate, Monostearin
Typical Purity	≥ 90% mono-glyceride
Melting Range	58 – 65 °C
Physical Appearance	Off-white to white free-flowing micronised powder

Particle Size Distribution (Micronised Grade)

Particle Size Parameter	Typical Value
D50	10 – 15 µm
D90	≤ 30 µm
D99	≤ 45 µm

3) Main Applications (Table Form)

Industry / Segment	Application
Polyolefin Processing	Internal anti-static additive
Masterbatch	Anti-static masterbatch formulation
Packaging Films	Reduction of static charge build-up
Injection Moulding	Anti-static moulded parts
Extrusion Coating	Static control in coated layers
Industrial Compounds	Dust and static control

4) Main Uses of Micronised Grade (Table Form)

Use Category	Functional Role of Micronised GMS 90%
Anti-Static Control	Reduces surface resistivity and charge accumulation
Surface Migration	Enables controlled bloom to polymer surface
Processing Aid	Improves melt flow and reduces friction
Dispersion Aid	Ensures uniform distribution in polymer matrix
Powder Handling	Reduces static during blending and feeding

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5) Specific Mentions – Micronised Grade Highlights

- Fine particle size promotes rapid and uniform surface migration
- Effective at low addition levels compared to coarse grades
- Minimises static attraction of dust and fines on finished parts
- Compatible with polyolefins, EVA, and styrenic polymers
- Preferred for anti-static masterbatch and dry-blend systems

6) Disclaimer

The information provided in this article is intended for technical reference only and is based on typical material characteristics and general industry practices. Performance may vary depending on polymer type, processing conditions, formulation, and end-use environment. Users should conduct appropriate trials and validations before commercial implementation.

Date of Creation: 26 December 2025

Date of Review: 26 December 2025

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