

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



TECHNICAL DATA SHEET

PENTAERYTHRITOL TETRASTEARATE (MICRONIZED)

PRODUCT CLASSIFICATION

Item	Description
Chemical Name	Pentaerythritol Tetrastearate
CAS No.	115-83-3
HS Code	3824.99.99
EINECS No.	204-116-4
Molecular Formula	$C_{76}H_{148}O_8$
Molecular Weight	~1201.0 g/mol
Synonyms	Pentaerythritol tetraoctadecanoate

PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description	Test Method
Appearance	White to off-white micronized powder	Visual
Odor	Odorless to mild fatty odor	Sensory
Purity	≥ 98.0%	GC
Acid Value	≤ 5 mg KOH/g	Titration
Saponification Value	185 – 200 mg KOH/g	Titration
Melting Point	55 – 65 °C	DSC
Moisture	≤ 0.5%	Oven drying
Bulk Density	0.30 – 0.50 g/cm ³	Tapped Density
Particle Size (D50)	5 – 10 μm	Laser Diffraction
Particle Size (D90)	< 30 μm	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.

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

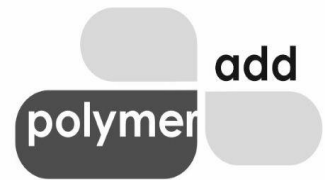
Element	Typical Limit	Test Method
Lead (Pb)	≤ 2 ppm	ICP, AAS
Cadmium (Cd)	≤ 1 ppm	ICP, AAS
Mercury (Hg)	≤ 1 ppm	ICP, CV-AAS
Arsenic (As)	≤ 1 ppm	ICP, AAS

USES / APPLICATION (MICRONISED / SOLID-STATE RELEVANT)

Industry	Commercial Application / Uses
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Polyolefins (PE, PP)	High-performance internal and external lubricant; improves melt flow, reduces torque, and enhances surface finish
PVC Processing	External lubricant with excellent metal release; provides controlled fusion and reduced plate-out
Engineering Plastics	Processing aid for improved flow and reduced energy consumption during compounding
Masterbatch & Compounds	Dispersion aid for pigments and fillers; ensures uniform distribution and minimizes agglomeration
Rubber Processing	Internal lubricant and mold release agent; improves filler dispersion and reduces sticking
Powder Processing & Dry Blends	Flow aid and anti-caking agent; improves powder handling, feeding, and storage stability
Functional Fillers & Mineral Systems	Surface modification aid; enhances compatibility between fillers and polymer matrix
Additive One-Pack Systems	Component in micronised additive blends; improves homogeneity and dosing consistency
Coatings (Powder Systems)	Slip and flow modifier; improves surface smoothness and reduces defects
Mold Release Applications (Solid Form)	Reduces adhesion to molds and processing equipment; improves demolding efficiency

US FDA 21 CFR LISTING

CFR Section	Title / Description
21 CFR 178.2010	Listed as an approved additive (lubricant / processing aid / stabilizer) under specified conditions
21 CFR 172.860	Permitted as a fatty acid ester for use in food-related applications under GMP conditions

Compliance with applicable use levels, migration limits, and end-use conditions must be verified by the user.

DISCLAIMER

This product is intended for industrial use in polymer, coating, or specialty chemical applications. It is not recommended for pharmaceutical or direct food use unless separately certified. Compliance with food-contact and regional regulatory approvals must be verified by the user. Values above are typical for general reference and not binding specifications unless explicitly confirmed in writing.

Month of Creation: July 2025

Month of Review: July 2027