

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



TECHNICAL DATA SHEET ZNST-557

PRODUCT CLASSIFICATION

Chemical Name	ZINC STEARATE (MICRONIZED)
Grade Name	ZNST-557
CAS No.	557-05-1
HS Code	2915.70.00
EINECS No.	209-151-9
Molecular Formula	$\text{Zn}(\text{C}_{18}\text{H}_{35}\text{O}_2)_2$
Molecular Weight	~632.35 g/mol
Synonyms	Stearic acid zinc salt, Zinc distearate

PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description	Test Method
Appearance	White to off-white fine powder	Visual
Odor	Odorless or faint fatty odor	Sensory
Free Fatty Acid	≤ 3.0% (as stearic acid)	Titration
Zinc Content (as Zn)	10.0 – 12.5%	Complexometric
Loss on Drying	≤ 2.0%	Oven drying (105 °C)
Melting Point	~120 – 130 °C (softens & decomposes)	Capillary
Solubility in Water	Insoluble	Observation
Solubility in Organic Solvents	Dispersible in hot oils and hydrocarbons	Literature
Bulk Density	0.25 – 0.45 g/cm ³	Tapped Density
Particle Size (D50)	6 – 10 µm	Laser Diffraction
Particle Size (D99)	< 25 µm	Laser Diffraction

➤ These are typical values for micronized technical grade. Actual commercial specs may vary slightly.

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

Element	Typical Limit	Test Method
Lead (Pb)	≤ 5 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	Lubricant and release agent in PVC, PE, PP processing
Rubber	Processing aid and release agent in tire and compound manufacturing
Coatings & Paints	Matting agent and dispersing additive

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Inks	Anti-settling and surface modifier
Powder Coatings	Flow modifier, anti-caking agent
Cosmetics	Binder and bulking agent (cosmetic grade only)

US FDA 21 CFR LISTING

CFR Section	Title / Description
178.2010	Stabilizers and lubricants in polymers
175.105	Adhesives for indirect food contact
177.2600	Rubber articles intended for repeated use

COLOUR IMPACTING IMPURITIES

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

PRODUCT PERFORMANCE IMPACTING IONS / IMPURITIES

Ion / Element	Typical Max Limit (ppm)	Test Method
Sodium (Na)	≤ 100 ppm	ICP, AAS, XRF
Potassium (K)	≤ 100 ppm	ICP, AAS, XRF
Calcium (Ca)	≤ 300 ppm	ICP, AAS, XRF
Magnesium (Mg)	≤ 200 ppm	ICP, AAS, XRF
Chloride (Cl ⁻)	≤ 100 ppm	Ion Chromatography
Sulfate (SO ₄ ²⁻)	≤ 100 ppm	Ion Chromatography

Disclaimer:

This product is intended for industrial use only. Food-contact and cosmetic use require regulatory compliance and grade-specific validation. Values provided are typical and not to be interpreted as guaranteed specifications unless confirmed in writing.

Month of Creation: July 2025

Month of Review: July 2027