

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalaremprikat, 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 CAST-1592

PRODUCT CLASSIFICATION

Chemical Name	CALCIUM STEARATE (MICRONIZED)
Grade Name	CAST-1592
CAS No.	1592-23-0
HS Code	2915.70.00
EINECS No.	216-472-8
Molecular Formula	$\text{Ca}(\text{C}_{18}\text{H}_{35}\text{O}_2)_2$
Molecular Weight	~607.02 g/mol
Synonyms	Stearic acid calcium salt, Calcium distearate

PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description	Test Method
Appearance	White to off-white fine powder	Visual
Odor	Odourless or faint fatty odor	Sensory
Free Fatty Acid	≤ 3.0% (as stearic acid)	Titration
Calcium Content (as Ca)	6.0 – 7.5%	Complexometric
Loss on Drying	≤ 2.0%	Oven drying (105 °C)
Melting Point	> 140 °C (softens/decomposes)	Capillary
Solubility in Water	Insoluble	Literature
Solubility in Organic Solvents	Soluble in hot hydrocarbons and oils	Observation
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

➤ Commercial specifications may vary slightly. Above values are representative for micronized technical grade.

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 / PVC	Lubricant and release agent; internal/external lubricant in PVC, PP, PE
Rubber	Processing aid and mold release additive
Powder Coatings	Flow and anti-caking agent

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Paints & Inks	Flatting agent and dispersant
Cosmetics	Opacifier and texture enhancer (cosmetic-grade only)
Paper	Water repellent and anti-dusting additive

US FDA 21 CFR LISTING

CFR Section	Title / Description
178.2010	Stabilizers and lubricants in polymers
175.300	Resinous and polymeric coatings
177.2600	Rubber articles intended for repeated use
175.105	Adhesives – indirect food contact applications

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
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 for industrial use only. Use in food-contact or cosmetic formulations must be validated against applicable regulations. Typical values are provided for reference only and do not constitute a specification unless agreed in writing.

Month of Creation: July 2025

Month of Review: July 2027