

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 ALST-7047

PRODUCT CLASSIFICATION

Chemical Name	ALUMINIUM STEARATE (MICRONIZED)
Grade Name	ALST-7047
CAS No.	7047-84-9
HS Code	2915.70.00
EINECS No.	615-162-7
Molecular Formula	$C_{54}H_{105}AlO_6$
Molecular Weight	~877.34 g/mol
Synonyms	Aluminium tristearate, Stearic acid aluminium salt

PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value / Description	Test Method
Appearance	White to off-white fine powder	Visual
Odor	Mild fatty odor	Sensory
Free Fatty Acid	≤ 3.0% (as stearic acid)	Titration
Aluminium Content	4.5 – 5.5% (as Al)	Complexometric
Loss on Drying	≤ 2.0%	Oven drying (105 °C)
Melting Point	~120 – 160 °C (softens & decomposes)	Capillary
Solubility in Water	Insoluble	Literature / Observation
Solubility in Organic Solvents	Soluble in hot oils and hydrocarbons	Observation
Bulk Density	0.20 – 0.40 g/cm ³	Tapped Density
Particle Size (D50)	6 – 10 µm	Laser Diffraction
Particle Size (D99)	< 25 µm	Laser Diffraction

➤ Values are representative of micronized commercial grade; actual values may vary based on supplier and processing.

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	Internal lubricant and release agent in rigid and flexible PVC
Paints & Coatings	Gelling agent and suspension aid in alkyd paints and greases

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Inks	Thickener and anti-settling agent
Cosmetics	Binder and opacifier in powders and creams
Lubricating Greases	Gelling agent for aluminium-based greases
Adhesives	Flow modifier in solvent-based systems

US FDA 21 CFR LISTING

CFR Section	Title / Description
175.300	Resinous and polymeric coatings – permitted as inert ingredient
178.2010	Stabilizers and lubricants for polymers
178.3910	Surface lubricants in manufacture of metallic food-contact articles

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)	≤ 10 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:

Aluminium stearate is intended for industrial use. It is not suitable for use in pharmaceuticals or medical implants. For food-contact applications, compliance with applicable regional regulations must be confirmed by the user. Typical values are not specifications unless otherwise agreed in writing.

Month of Creation: July 2025

Month of Review: July 2027