

Polymer Add (Thailand) Co.,Ltd.

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TECHNICAL DATA SHEET CALCIUM STEARATE MICRONISED Dry powder for industrial applications

PRODUCT CLASSIFICATION

Item	Description
Chemical name	Calcium stearate
Synonyms	Calcium salt of stearic acid; calcium octadecanoate
CAS number	1592-23-0
EC number	216-472-8
Molecular formula	$\text{Ca}(\text{C}_{18}\text{H}_{35}\text{O}_2)_2$
Molecular weight	607.02 g/mol
Product form	Dry, fine white powder
Product description	Micronised metallic soap used as a processing lubricant, acid scavenger, mould release agent and hydrophobic additive in suitable industrial formulations

PHYSICAL AND CHEMICAL PROPERTIES

Property	General characteristic or specification requirement
Appearance	Fine white powder
Physical form	Dry, micronised solid
Water solubility	Practically insoluble
Surface character	Hydrophobic
Thermal behaviour	150–160°C
Particle size	Typically D99-100 less than 20 microns
Moisture / loss on drying	≤3.0%
Elemental Calcium content	6.6–7.4%
Free fatty acid, as stearic acid	≤1.0%
Ash content	9.2–10.2%
Bulk density, fine dry powder	≤260 g/L (≤0.26 g/cm ³)

USES AND APPLICATIONS

Applications involving addition as a dry, micronised powder

Industry or formulation	Function of Calcium Stearate	Relevance of micronised particle size
PP and PE resin compounds	Acid scavenger and processing lubricant	Fine particles support distribution through the resin and additive blend. Film and fibre applications require attention to dispersion and filter performance.
PVC dry blends	Lubricant and component of suitable calcium-based stabiliser systems	Supports distribution throughout resin and powder additives. Lubricant balance

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		must suit the required fusion and processing behaviour.
Polymer compounds and masterbatches	Lubricating additive in compatible formulations	Supports incorporation into powder preblend and distribution during compounding.
Rubber compounds	Processing lubricant and release aid in suitable formulations	Fine powder facilitates incorporation during mixing. Cure behaviour and finished properties require verification.
SMC and BMC polyester compounds	Internal mould release agent	Fine-particle distribution supports consistent incorporation into the filled resin compound.
Dry mortar and construction mixes	Hydrophobic additive in suitable cement- and lime-based formulations	Fine powder supports distribution through the dry mix, helping develop water-repellent behaviour after application.

STORAGE AND HANDLING

Store in tightly closed original packaging in a cool, dry area. Protect from moisture and contamination. Minimise airborne dust during charging and mixing and use suitable dust extraction. Refer to the current Safety Data Sheet for protective measures and detailed handling requirements.

DISCLAIMER

This sheet provides general technical information for evaluating dry, micronised Calcium Stearate in industrial formulations. Product specifications, application performance and regulatory suitability must be confirmed for the actual grade supplied. Food, pharmaceutical, cosmetic or food-contact suitability requires separate grade-specific documentation.

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