

Polymer Add (Thailand) Co.,Ltd.

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APPLICATION PROFILE

MICRONISED ANHYDROUS SODIUM SULFATE

PRODUCT FORM AND PURPOSE

PRINCIPAL COMMERCIAL APPLICATION

The principal proven application for Polymer Add is flexible PVC film and sheet manufacture. The material is supplied commercially in 1 MT lots to an established PVC processor, providing direct production experience rather than only laboratory or literature-based evidence.

The micronised powder is incorporated into the PVC dry blend as a fine inorganic filler and formulation modifier. It is particularly relevant to continuous calendering operations producing flexible roll goods where smooth sheet formation, controlled appearance, repeatable feeding and economical formulation are important.

WHY THE MICRONISED FORM IS USED

Micronisation is required because coarse sodium sulfate crystals can disperse poorly and create visible specks, surface irregularities or inconsistent sheet formation. A controlled fine powder distributes more uniformly through the plasticised PVC compound and is better suited to thin films, printed sheets, embossed products and coated structures. Particle-size control is therefore part of the product function, not merely a change in physical appearance.

PRIMARY PVC END USES

PVC Application	Specific Use of Micronised Sodium Sulfate
Flexible calendered PVC film	Fine filler and formulation modifier for continuous roll-to-roll sheet production.
PVC tablecloth sheet	Controlled distribution and smooth surface formation in printed, embossed or laminated sheet.
Raincoat and apron film	Fine-particle addition for flexible film requiring consistent gauge and appearance.
Mattress-protector sheet	Uniform distribution across wide flexible sheet produced by calendering.
Semi-clear or frosted PVC film	Controlled filler addition where partial haze or a softly diffused appearance is acceptable.
Synthetic leather and coated fabric	Fine filler in selected PVC coating or compact layers, subject to formulation trials.

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COMMERCIAL RELEVANCE TO PVC PROCESSORS

This application is commercially relevant because Polymer Add already supplies micronised anhydrous sodium sulfate for PVC production in repeat 1 MT lots. The application profile therefore centres on flexible PVC film and sheet rather than presenting unverified markets as established uses.

The product is best positioned as a fine functional filler and formulation modifier for plasticised PVC. It should not be presented as a universal replacement for calcium carbonate or as suitable for every clear PVC formulation. The appropriate grade and addition level depend on the customer's required transparency, flexibility, surface finish and processing conditions.

CRITICAL PRODUCT REQUIREMENTS

Requirement	Commercial Relevance
Chemical identity	Anhydrous sodium sulfate, CAS 7757-82-6.
Particle-size control	A fine, repeatable distribution with a tight top cut; D100 below 20 µm is the principal target for the current micronised grade.
Moisture control	Low moisture and sealed storage are essential because moisture can affect dry blending, processing and sheet quality.
Dispersion	The powder must distribute uniformly through the plasticised PVC compound without coarse agglomerates.
Surface treatment	An uncoated or compatible surface-treated grade may be selected according to the PVC formulation and mixing process.

FORMULATION AND COMMERCIAL TRIAL BASIS

The supplied PVC application material identifies an indicative starting range of approximately 3-12 phr for flexible PVC film and sheet. This is a development range, not a universal recommendation. Higher additions in coated fabric, synthetic leather, tarpaulin or industrial sheet require separate formulation work.

Trials should compare dry-blend flow, fusion behaviour, roll release, sheet gauge, surface smoothness, haze or opacity, flexibility, tensile and tear properties, printing or lamination performance and finished-product appearance against the customer's current formulation.

SECONDARY APPLICATIONS UNDER DEVELOPMENT

Other potential uses include PE transparent-filler masterbatch, translucent blown film, carpet-backing compounds, polymer-coated paper and polymer-paper composites. These applications are secondary opportunities and should not be described as proven Polymer Add commercial uses until customer production trials and repeat orders establish them.

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DEVELOPMENT BASIS

Before commercial supply to a new PVC customer, the processor should confirm the PVC type, plasticiser system, stabiliser package, mixing sequence, calendering or extrusion process, target film gauge and required appearance. Final dosage, particle-size limits, moisture specification and surface treatment should be agreed after trials establish an acceptable processing and performance window.

DISCLAIMER

This Application Profile is provided for general technical and commercial guidance only. Product suitability, dosage, processing conditions and final performance depend on the customer's formulation, equipment and intended application. Customers must conduct their own trials and confirm compatibility, regulatory compliance, safety and finished-product performance before commercial use. The information provided does not constitute a product-performance guarantee or specification unless separately agreed in writing by Polymer Add (Thailand) Co., Ltd.

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