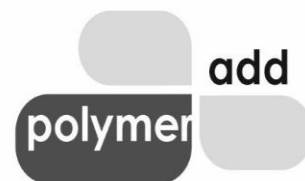


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APPLICATION PROFILE

CALCIUM BENZOATE- MICRONISED

PRODUCT FORM AND PURPOSE

MICRONISED CALCIUM BENZOATE is a fine white powder of the calcium salt of benzoic acid, prepared for uniform incorporation into selected plastic and polymer formulations.

Calcium benzoate has commercially documented applications as a nucleating agent for polypropylene and as a stabilizer component in PVC and PE/PVC blends. The micronised form is intended to improve physical distribution and reduce coarse additive particles during premixing and compounding.

Its commercial value comes from its functional chemistry combined with controlled particle size, consistent powder condition and effective dispersion. The hydration state of the supplied material must be identified because it affects water content and processing behaviour.

SPECIFIC COMMERCIAL APPLICATION

The principal application areas are polypropylene nucleation and incorporation into selected PVC stabilizer formulations.

For polypropylene, the product is used where controlled crystallisation is required. Evaluation should establish its effect on crystallisation temperature, cooling behaviour and finished article properties in the actual resin grade.

For PVC and PE/PVC blends, calcium benzoate is incorporated as part of a formulated stabilization system. Performance depends on the complete additive package, dosage and processing conditions; it should not be presented as a universal standalone stabilizer.

WHY THE MICRONISED FORM IS USED

Micronisation reduces the coarse particle fraction and can improve distribution of calcium benzoate through dry blends, additive concentrates and polymer compounds.

This is particularly relevant at low addition levels, where coarse particles or agglomerates can produce uneven additive distribution. Controlled fineness also helps limit visible inclusions in finished articles.

For nucleation applications, the intended benefit is more uniform distribution of the additive throughout the polymer. Improved crystallisation performance must be demonstrated by comparison with the same calcium benzoate in its original particle-size distribution.

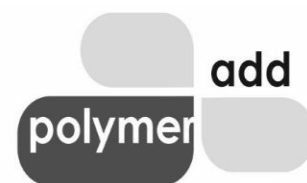
Micronisation does not change the chemical identity or eliminate the influence of hydration, thermal behaviour or compatibility with other additives.

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TARGET APPLICATION AREAS

APPLICATION	SPECIFIC USE OF MICRONISED CALCIUM BENZOATE
Polypropylene compounds	Fine nucleating additive for evaluation of crystallisation behaviour and consistency in the selected PP grade.
Polypropylene additive concentrates	Uniform incorporation into a compatible carrier to facilitate low-dose feeding and subsequent dispersion.
PVC stabilizer blends	Fine calcium benzoate component in a formulated stabilization package, supporting consistent premixing and distribution.
PVC compounds	Introduction through a qualified stabilizer system where low coarse-particle content and uniform additive incorporation are required.
PE/PVC blends	Stabilizer component in selected formulations, with compatibility and processing performance confirmed in the actual blend.

RELEVANCE TO PLASTICS AND POLYMER COMPOUNDERS

MICRONISED CALCIUM BENZOATE is relevant when a formulator already requires calcium benzoate chemistry and needs improved control of its physical distribution.

For polypropylene, qualification should focus on crystallisation response and the resulting processing and product properties. For PVC formulations, qualification should focus on heat stability, colour development and compatibility with the complete stabilizer package.

Paints and coatings: Calcium benzoate has published evidence of steel-corrosion inhibition in aqueous nitrate solutions. However, this does not establish commercial performance of micronised calcium benzoate in a paint film. Accordingly, anticorrosive paints and protective coatings are development applications rather than established commercial uses in this profile. [ScienceDirect](#)

Where the ingredient is fully dissolved before use, any benefit of micronisation relates primarily to incorporation or dissolution rate; the original powder particle size does not remain a feature of the finished formulation.

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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