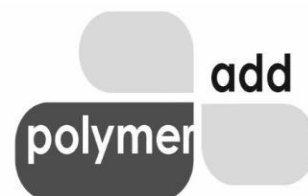


Polymer Add (Thailand) Co.,Ltd.

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TECHNICAL DATA SHEET

VCIGUARD XP80

Micronized VCI Additive Blend – Long-Term Masterbatch for Export-Grade Multi-Metal Protection

Product Description

VCIGUARD XP80 is a premium, long-term active VCI additive blend engineered for export packaging applications. Designed to protect steel, aluminum, galvanized steel, copper, and brass components during extended storage and overseas transit, the blend offers controlled vapor-phase release and robust contact-phase inhibition. It is optimized for incorporation into polyethylene masterbatches for blown films, stretch wraps, or protective sheeting.

Composition

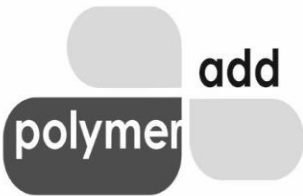
Chemical Name	CAS Number	Function	Typical %
Dicyclohexylammonium Benzoate	53540-12-8	Long-term vapor-phase inhibitor for steel and aluminum	20%
Benzylammonium Benzoate	19855-38-6	Copper/brass/bronze corrosion inhibitor	15%
Monoammonium Phosphate (MAP)	7722-76-1	Vapor + contact inhibitor for Al and galvanized metals	10%
Micronized GMS or PE Wax	31566-31-1 9002-88-4	Film processing aid and carrier in polymer systems	10%
Hydrophobic Fumed Silica (R972)	67762-90-7	Anti-caking and moisture barrier	1%
Micronized Calcium Carbonate	471-34-1	Carrier, bulk filler; enhances dosing and dispersion	44%

Physical Properties

Property	Value / Description
Appearance	Fine white to pale beige powder
Odor	Mild ammonium-like; non-irritating
Particle Size (D100)	< 20 μm (micronized)
Bulk Density	$\sim 0.40\text{--}0.55 \text{ g/cm}^3$
Flow Characteristics	Treated with silica to improve handling
Moisture Content	< 0.5% (as packed)

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Thermal Characteristics

Component	Melting / Decomposition Temperature (°C)
Dicyclohexylammonium Benzoate	~220–240 °C
Benzylammonium Benzoate	~195–205 °C
Monoammonium Phosphate (MAP)	>200 °C (decomposes, NH ₃ release)
GMS (Micronized)	~55–65 °C
PE Wax (Micronized)	~105–120 °C
Hydrophobic Fumed Silica (R972)	~1000 °C
Calcium Carbonate	Stable >800 °C

Storage and Handling

- Store in cool, dry conditions in sealed packaging to avoid caking.
- Avoid exposure to moisture and high humidity; use multilayer PE bags.
- Wear mask, gloves, and goggles during blending and packaging.
- Shelf-life: 12 months from date of manufacture under ideal storage conditions.

Packaging Options

Packaging Type	Standard Size	Remarks
Triple-Laminated PE Bags	10 Kg / 15 Kg	Moisture-resistant with inner liner
HDPE Drums	25 Kg	Ideal for export and long-term storage
Fiberboard Cartons	On Request	With PE inner liner
Custom Packaging	Available on request	MOQ and lead times apply