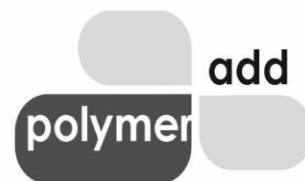


# Polymer Add (Thailand) Co.,Ltd.

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

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## TECHNICAL DATA SHEET

### VCIGUARD HF70

Micronized VCI Additive Blend – High-Strength Film Grade for Copper + Aluminium Protection

#### Product Description

VCIGUARD HF70 is a high-performance VCI masterbatch-grade additive blend specifically designed for blown and cast film applications requiring strong corrosion protection for copper, brass, aluminum, zinc, and mild steel. It combines fast-acting vapor-phase and high-temperature stable contact-phase inhibitors with excellent extrusion compatibility. The formulation is optimized for use in LDPE, LLDPE, and other film-grade polymers with good flow and dispersion properties.

#### Composition

Chemical Name	CAS Number	Function	Typical %
Morpholinium Benzoate	31138-65-5	Fast-acting multi-metal corrosion inhibitor	20%
2-Mercaptobenzimidazole (MBI)	583-39-1	High-temp stable Cu/Brass inhibitor	10%
Sodium Succinate	150-90-3	Biodegradable Al/Zn-friendly corrosion inhibitor	10%
Micronized PE Wax or GMS 90%	9002-88-4 31566-31-1	Melt flow modifier and film-forming aid	10%
Hydrophobic Fumed Silica (R972 Equivalent)	67762-90-7	Moisture barrier and anti-caking agent	1%
Micronized Calcium Carbonate	471-34-1	Carrier and flow enhancer; completes blend to 100%	49%

#### Physical Properties

Property	Value / Description
Appearance	Fine beige to off-white powder
Odor	Slight amine odor (from Morpholinium)
Particle Size (D100)	< 20 µm (micronized)
Bulk Density	~0.40–0.55 g/cm <sup>3</sup>
Flow Characteristics	Free-flowing with silica-treated surface
Moisture Content	< 0.5% (as packed)

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## Thermal Characteristics

Component	Melting / Decomposition Temperature (°C)
Morpholinium Benzoate	~190–200 °C
2-Mercaptobenzimidazole (MBI)	>280 °C
Sodium Succinate	~200–230 °C
PE Wax (Micronized)	~105–120 °C
GMS 90%	~55–65 °C
Hydrophobic Fumed Silica (R972)	~1000 °C
Calcium Carbonate	Stable >800 °C

## Storage and Handling

- Store in sealed packaging in a dry and cool environment (<30 °C).
- Avoid moisture ingress to prevent caking of succinate and citrate-based components.
- Wear dust mask, gloves, and protective eyewear during handling.
- Shelf-life: 12 months from date of manufacture if stored properly.

## Packaging Options

Packaging Type	Standard Size	Remarks
Triple-Laminated PE Bags	10 Kg / 15 Kg	Inner liner to prevent moisture pickup
HDPE Drums	25 Kg	Recommended for export and long-term use
Fiberboard Boxes	On Request	With sealed inner PE liner
Custom Packing	Available on request	MOQ and lead time apply

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