

# 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 ECO75

Micronized VCI Additive Blend – Eco-Friendly, BTA-Free, Biodegradable Corrosion Protection

### PRODUCT DESCRIPTION

VCIGUARD ECO75 is a biodegradable, environmentally safe VCI blend designed to offer multi-metal corrosion protection for aluminum, zinc, galvanized steel, and mild steel. It contains no BTA or nitrite-based ingredients and is ideal for applications where regulatory or sustainability standards are critical. This micronized blend is suitable for films, paper coatings, molded compounds, or extruded polymer matrices.

### COMPOSITION

Chemical Name	CAS Number	Function	Typical %
Sodium Succinate	150-90-3	Biodegradable corrosion inhibitor for Zn/Al/steel	10%
Monoammonium Phosphate (MAP)	7722-76-1	Corrosion inhibitor for Al, Zn, and galvanized steel	10%
Sodium Benzoate	532-32-1	Vapor-phase inhibitor; base protection for steel	30%
Polyethylene Wax (Micronized)	9002-88-4	Processing aid; dispersibility and film-forming support	8%
Hydrophobic Fumed Silica (R972)	67762-90-7	Anti-caking and moisture barrier	1%
Micronized Calcium Carbonate	471-34-1	Filler and flow enhancer; balances blend to 100%	41%

### PHYSICAL PROPERTIES

Property	Value / Description
Appearance	Fine white to light beige powder
Odor	Mild or odorless
Particle Size (D100)	< 20 $\mu\text{m}$ (micronized)
Bulk Density	~0.40–0.55 $\text{g/cm}^3$
Flow Characteristics	Free-flowing with silica-treated surface
Moisture Content	< 0.5% (as packed)

### THERMAL CHARACTERISTICS

Component	Melting / Decomposition Temperature ( $^{\circ}\text{C}$ )
Sodium Succinate	~200–230 $^{\circ}\text{C}$ (decomposes)

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Monoammonium Phosphate (MAP)	>200 °C (decomposes with NH <sub>3</sub> release)
Sodium Benzoate	410 °C
Polyethylene Wax (Micronized)	105–120 °C (softening point)
Hydrophobic Fumed Silica (R972)	~1000 °C
Calcium Carbonate	Stable >800 °C

## STORAGE AND HANDLING

- Store in sealed containers in a dry, ambient environment.
- Avoid direct contact with moisture and high temperatures.
- Polyethylene wax may soften or clump at elevated temperatures—use chilled storage and dry blending for best results.
- Use PPE: gloves, goggles, dust mask.
- Pre-blend R972 at final stage to reduce dusting.
- 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	With inner liner for moisture protection
HDPE Drums	25 Kg
Recommended for bulk use and long storage	Fiberboard Boxes
On Request	With sealed PE inner bags
Custom Packing	Available on request
MOQ and lead time may apply	

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