

Chartwell D-531.1

TECHNICAL DATA

ADHESION PROMOTERS

GENERAL DESCRIPTION: A C-10 carboxy functional metal organic adhesion promoter synthesized using a **STABILIZED BIMETAL PRECURSOR**. The product is supplied in dipropylene glycol for solubilization of the active component in polymer matrices.

PHYSICAL PROPERTIES:

Physical form	Clear liquid
Color	pale yellow
Metal content (Total %)	4.3-4.5
Complexed organics	9.9-10.1
Specific gravity (g/ml)	1.12
pH (2% soln)	4.0
Active matter (wt %)	24.0
Solvent	dipropylene glycol
Organofunctionality	C-10 carboxy

APPLICATIONS:

(1) Coatings/ Adhesives: Recommended for enhancing adhesion of high solids solvent-borne acrylic polyester, alkyd, coatings/ adhesives to:

- All metals, improve salt fog resistance, reduce creep at the scribe, and reduce blistering
- Many plastics, including ABS and treated PP/ PE
- Also, improved adhesion to many plastics, concrete, rubber, wood and ceramics.

(2) Pigment dispersion: Recommended for dispersion of difficult to disperse pigments, ie phthalo blue/ green, carbon black, etc. Also for all inorganic pigments, conductive pigments, and mineral fillers. Particularly useful for the dispersion of these pigments in solvent-borne coatings and polyolefins.

(3) Thermoplastics: Use of D-531.1 to treat mineral fillers, ie calcium carbonate, mica, silica, clay, etc. will result in improved physical properties of the compounded polyolefin.

PROCEDURE: HIGH SHEAR MIXING NECESSARY IN ALL SOLVENT-BORNE SYSTEMS

1. Coatings/ Inks: Optimum performance is achieved when added directly to the grind stage resin and high shear mixed for 15 mins before adding other components. **Must be high shear mixed with a Cowles type mixer. Milling alone is not sufficient.**

2. Adhesives: 1.0-2.0 phr, post add recommended under agitation.

3. Plastics: 1.0-2.0 phf (parts per hundred filler); recommend pretreat of pigments/ fillers in a Henschel or similar mixer and subsequently compound with resin. For high surface area pigments/ fillers, ie fumed silica, carbon black, phthalo and similar use 3.0-5.0 phf .

4. Rubber: 1.0-3.0 phr, add directly onto silica or other filler and compound in a Banbury mixer.

