

TECHNICAL DATA

HALOX[®] 570

Organic Corrosion Inhibitor

Chemical Description

Organic Acid Amine Complex

Product Description

HALOX[®] 570 is an organic corrosion inhibitor designed for use in water based industrial and decorative coatings to provide flash rust and long-term corrosion protection on metal surfaces. HALOX[®] 570 is especially effective along weld seams and in some cases, can also be used in solvent-based coatings and in UV cured systems.

HALOX[®] 570 may be used in formulations based on water-based acrylic latexes and co-polymers, styrene/acrylic latexes, acrylated epoxy esters, 2 pack epoxy systems, alkyds, alkyd/acrylic blends, and 1 or 2 pack polyurethane.

HALOX[®] 570 may be used in both water-based primers and direct-to-metal topcoats. In direct-to-metal coatings HALOX[®] 570 has minimal effect on gloss reduction.

Application*

Recommended concentrations range from 1-4% HALOX[®] 570 (30% solution) based on total formula solids. The amount of HALOX[®] 570 required for optimum performance should be determined in trials over the recommended concentration range.

Solubility

(g/100 g of neutralized 30% solution*) at 20°C

Isopropanol	~30
n-Butanol	~20
Diethylene glycol methyl ether	~40
Methyl isobutylketone (MIBK)	~15
Xylene	<1
Aliphatic hydrocarbons (boiling range: 160-200°C)	<1
Water (pH 7)	≤0.25

Typical Properties

These are typical values and do not represent product specifications:

Appearance	White to light beige crystalline powder
Melting Range	67-73°C
Density (g/ml)	1.24
pH (10% solution by wt)	6.5
Oil Absorption (lbs/100 lbs)	12.9

* See neutralization example on Page 2

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US Patent No. 5,519,074

Incorporation

There are several methods of incorporating HALOX[®] 570. The preferred method is to make a pre-neutralized concentrate in water using an amine that is volatile under your curing conditions, then post-add or add to the letdown.

A neutralization example:

HALOX[®] 570 (approx. 30% solution)	Weight
De-ionized Water	62.8
28% Ammonium Hydroxide	7.2
HALOX [®] 570	30.0
<hr/> Total	<hr/> 100.0

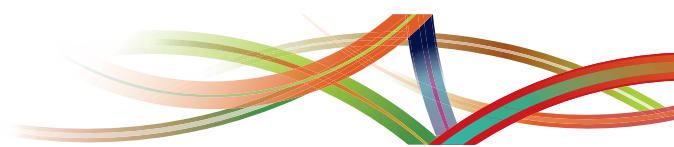
Stir Slowly, adjust pH 8-9

Alternatively, a concentrate can be made in a co-solvent according to the solubility data above, then post-add or add to the letdown. It may also be added to a pigment grind as a solid.

In general, add the aqueous concentrate or co-solvent solution to the amine/amide part of a 2 pack epoxy or to the polyol of a 2 pack polyurethane.

If possible, avoid systems with acetic acid—use surfactant stabilized hardeners instead.

If you are removing a heavy metal based anti-corrosive pigment, compensate for its removal with an extender (filler) so that the ratio PVC:CPVC remains constant. However, HALOX[®] 570 can be used in conjunction with anti-corrosive pigments, preferably based on compounds defined as non-toxic or reportable under applicable regulations. Check compatibility, shelf life (e.g. accelerated at high temperature), cure and pot-life, if applicable. Other formulation variables may also be optimized, for example, dispersants, surfactants, and PVC:CPVC ratio.



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