



CORTEC
CORPORATION

Environmentally Safe VpCI®/MCI® Technologies

EcoShield® VpCI®-386 Water Based Microcorrosion Inhibiting Coating

DESCRIPTION

EcoShield® VpCI®-386 is a fast drying, water-based acrylic one coat system (topcoat) that can be applied DTM (Direct to Metal) and provides protection in harsh, outdoor, unsheltered applications. The complex mixture of non-toxic, organic inhibitors offers protection that competes with most paints and zinc-rich primers. Provides multi-metal protection. Excellent UV resistance. EcoShield® VpCI®-386 is weldable and can be used to keep surfaces corrosion-free prior to welding. Can be matched to most custom colors.

NSN 8030-01-481-8897 (clear only)

UFI: F703-K2CV-4U1H-8TAS (clear only)

PACKAGING & STORAGE

EcoShield® VpCI®-386 is available in 5 gallon (19 L) pails, 55 gallon (208 L) metal drums, liquid totes, and bulk.

Keep product from freezing (unless using winterized version).

To ensure best product performance, store in original packaging, indoors, and out of direct sunlight at 40-100 °F (4-38 °C).

Shelf life: 1 year

HIGH PERFORMANCE VpCI® COATINGS



CHARACTERISTICS/TECHNICAL DATA

Volume Solids	31%
Gloss (ASTM D532)	80+
VOCs (ASTM D3960)	0.6 lbs/gal (72 g/L)
Viscosity	50-60 sec+ Zahn #3
Pencil Hardness (ASTM D3363)	HB-H
Spreading Rate	497 sq.ft/gal @ 1.0 mils DFT (12.2 sq.m/L @ 25 µm)
Weight per Gallon	8.58 lbs/gal (1.03 kg/L)
Flash Point	>200 °F (93 °C)
Recommended DFT	1.5-3.0 mils (37.5-75 µm)
Recommended WFT	4.8-9.6 mils (120-240 µm)
Dry to Touch	30 min
Dry to Handle	1 hr
Recoat Time	Dry to touch
Force Dry	15-20 min @ 150 °F (65 °C)
Full Cure	3-7 days
Salt Spray (ASTM B117)	168 hrs
Humidity (ASTM D1748)	1000 hrs
Adhesion (ASTM D3359)	5B
Flexibility (ASTM D522)	½" mandrel (1.27 cm)

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APPLICATION

Surface Preparation

Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, rust inhibitors (except Cortec® approved), or any other surface contamination that could affect adhesion. For production line applications, use VpCI®-440 or similar phosphatizing pre-treatment. For structural steel applications, Cortec® recommends a minimum of a NACE #3/ SSPC-SP6 commercial blast clean. Consult Cortec® Technical Service and/or test system adhesion prior to full scale application.

A wash primer such as VpCI®-373 Green applied at 0.5-1.0 mils (12.5-25 microns) is recommended before applying the EcoShield® VpCI®-386 to aluminum, galvanized, or plated substrates. Other recommended primers include VpCI®-375, 395, and 396 depending on coating requirements. When solvent-based topcoats are applied over EcoShield® VpCI®-386, compatibility must be checked.

Note: Make sure dew point is more than 5 °F (2 °C) less than air temperature for application. Power agitate to a uniform consistency using a "squirrel cage" type mixer, hand-held drill mixer, or other equivalent method. VpCI®-386 can be applied by spray, roll, brush, or dip.

Typical Equipment Setups

HVLP / Conventional Spray

- Tip 0.02"-0.11" (0.5-2.8 mm)* dependent upon pressures and viscosity
- Air Pressure 45-55 psi
- Fluid Pressure 10 psi
- Fluid hose should be 3/8" (0.95 cm) I.D. with a maximum length of 50 feet (15.2 m). I.D. fluid hose can be used, but pressures may need to be adjusted. Pot should always have dual regulation and be kept at same elevation as spray gun.

Air Assisted Airless / Airless

- Tip 0.015"-0.035" (0.38-0.89 mm)* dependent upon pressures and viscosity
- Pressure 1800-2500 psi
- Hose should be 3/8" (0.95 cm) I.D. minimum, but a 1/4" (0.64 cm) I.D. whip end section may be used for ease of application. A maximum length of 100 feet (30.5 m) is suggested.

Cleanup

Clean tools/equipment immediately after use with water when paint is still wet. When dry, use Butyl Cellusolve or MEK. Follow mfg's safety recommendations when using any solvent.

*All tests performed after a 7 day cure at ambient temperature

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