

HP 400-2 Novo

High-Performance Epoxy Coating System

Description

HP 400-2 Novo is a 100% solids, high-performance epoxy novolac coating system. Engineered specifically for immersion in some of the most aggressive chemicals out there, including hydrochloric acid, sulfuric acid, phosphoric acid, sodium hydroxide, sour crude oil, refined products, and many more. HP 400-2 Novo provides excellent adhesion to concrete, steel, stainless steel or composite substrates and creates a long term, corrosion resistant barrier. It was specifically formulated to be a 2 to 1 ration by volume for easy application via plural component, airless spray equipment.

Product Advantages

- Zero VOC Coating system
- Outstanding adhesion to concrete, steel, masonry, wood and composites
- Highly blush-resistant formulation
- Excellent chemical resistance
- Easy to apply, low viscosity epoxy
- Ambient Cure Formulation
- Cures at temperatures as low as 50 °F

Suggested Application

Designed specifically for resistance to mineral acids and low pH exposure. Can handle primary immersion of hydrochloric acid up to 38% (concentrated), sulfuric acid up to 99% and phosphoric acid up to 85% at ambeint temperature. Also an excellent coating for the prevention of microbially induces corrosion. HP 400-2 Novo provides resistance to acids, caustic solutions, water treatment chemicals and a wide range of hydrocarbons. Ask the manufacturer for any additional chemical resistances.

Performance Data

	Test Method	Results
Abrasion Resistance	ASTM D4060; CS17 wheel, 1 Kg	Less than 68 mg loss/1000 cycles
Adhesion to Steel	ASTM D4541	>3000 psi
Heat Distortion Temperature	ASTM D648	195 °F
Direct Impact Resistance	ASTM D2794	48 in lbs
Immersion Resistance	Fresh and Salt water; 1 year	No rust, no blistering, no loss of adhesion
Humidity Resistance	ASTM D4585; 10,000 hours	No rust, no blistering, no cracking, no loss of adhesion
Dry Heat Resistance	ASTM D2485	300 °F (149 °C)

Product Characteristics

Finish: High Gloss

Color: Red or Grey

Volume Solids: 100%

Mix Ratio (by wt.): 2.86:1

Mix Ratio (by vol.): 2:1

Density: 1.35 g/mL

Approx. Coverage: 80 sqft/gallon at 20 mils

Maximum Film Build: 30 mils @ 75 °F : 15 mils @ 90 °F

Working Time: 55 minutes at 75 °F

Application Temperatures: 55 - 115 °F

HP 400-2 Novo is sold in 1, 2, 4, 15 and 150 gallon units

Shipping: FOB Longview, TX

Cure Schedule

Cures for Application	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Dry to Touch	14 hours	9 hours	6 hours
Dry Hard	36 hours	24 hours	12 hours
Overcoat Window	14 - 168 hours	9 - 120 hours	6 - 72 hours
Cures for Service	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Atmospheric	36 hours	24 hours	12 hours
Water Immersion	48 hours	36 hours	24 hours
Full Chemical Resistance	168 hours	120 hours	72 hours

Contact Love and Associates for elevated temperature post-cure information. Elevated temperature cures will increase chemical resistance and reduce return to service time.

Application Information

Contact the manufacturer for more information or if your project requires a detailed coating specification.

Ensure air and substrate temperatures are between 55-115 °F and the surface temperature is at least 5 °F above the dew point. Follow surface preparation guidelines below prior to coating.

Pour all of Part A – Hardener into Part B – Base and mix with low speed power agitator for 2-3 minutes. Using a paint stick or spatula, thoroughly scrape sides and bottom of unit. Mix with power mixer for an additional 2 minutes. Do not dilute products.

HP 400-2 Novo can be applied via brush, roller, single and plural component airless spray equipment.

Stripe coating of all crevices, weld seams, corners and sharp angles is an essential part of good coating practices and should be done for all immersion services. Heavily pitted areas should be filled with **FRP Repair Putty** or other resurfacing material prior to coating.

HP 400-2 Novo should be applied at 10 – 30 mils per coat in 1 – 3 coats according to the specification for your project. Acid immersion generally requires 30 - 50 mils DFT while secondary containment only requires 20 – 30 mils DFT.

After the coating system has cured, the dry film thickness should be measured by non-destructive dry film thickness gauges to verify minimum application thickness. The coating system should be free of all pinholes and holidays which can be tested through high voltage spark testing. The cured film should be essentially free of runs, sags, inclusions, and other defects. All coating deficiencies should be repaired and allowed to cure prior to return to service.

Airless Spray Guidelines

Below are examples of spray parameters that have been used successfully. Contact the manufacturer for more information.

Airless Spray Parameters:

Graco 70:1 Pump with Hopper
 Product Temperature in Hopper = 80 - 90 °F
 Inline Heater set at 120 °F
 Spray Pressure = 5,250 – 6,300 psi
 Tip Size = 0.021” – 0.031”
 50 - 100 ft hose (3/8”)

Plural Component Spray Parameters:

Graco XP-70 Pump with Hoppers
 Product Temperature in Hopper = 95 - 110 °F
 Spray Pressure = 4,550 – 5,750 psi
 Tip Size = 0.021” – 0.031”
 50 – 200* ft hose (3/8”) and 6 - 10 ft (3/8”) whip line
 *longer hose length may require heat tracing or insulation

Surface Preparation

Steel (Immersion Service): Remove all oil and grease from surface with an SSPC-SP 1 Solvent Wipe prior to blasting. Abrasive Blast to an SSPC-SP 10 Near white metal blast with a sharp angular profile of 2 – 3 mils (50 – 75 microns).

Steel (Atmospheric Corrosion): Remove all oil and grease from surface with an SSPC-SP 1 Solvent Wipe. Minimum surface preparation of SSPC-SP 2 Hand Tool Cleaning must be performed. For enhanced performance, an SSPC-SP 6 Commercial Blast Cleaning with an angular surface profile of 1.5+ mils should be used.

Concrete (Immersion/Secondary Containment): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. Surface should be thoroughly cleaned and dry. Concrete and mortar must be cured at least 28 days @ 75 °F. Surface must be free of laitance, concrete dust, dirt, form release, curing aids and other foreign material. **Sealer 200** should be applied prior to coating at 3-5 mils to increase adhesion and reduce outgassing.

Concrete (Atmospheric Corrosion): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. **Sealer 200** is not required but recommended for improved adhesion and aesthetics.

Previously Coated Surfaces: Consult with the manufacturer to ensure previous coating is compatible. If compatible and previous coating is in good condition, remove all loose coating and foreign materials. Brush blast or grind all glossy areas to a uniform dull finish. Remove dust, oil and debris with SSPC-SP 1 Solvent Wipe prior to coating.

Storage and Shelf Life

HP 400-2 Novo must be stored between 45 – 125 °F, out of direct sunlight. If stored in these conditions, the product will have a 24-month shelf life.

Safety Precautions

Please consult up-to-date Safety Data Sheets (SDS's) prior to use. An SDS should be available on site whenever Love and Associates' products are being used.

Warranty Information

The manufacturer warrants that our products are free of manufacturing defects in accordance with applicable manufacturer's quality control parameters. Liability for products proven defective, if any, is limited to replacement of defective product or refund of purchase price as determined by the manufacturer. Additional warranties and protection are available. Contact Love and Associates for more information.

Disclaimer

The information and recommendations set forth upon this data sheet are based on years of laboratory and field analysis. This information is intended to be used as guidance only as many factors affect the performance of polymeric systems. Actual exposure conditions are the best test of suitability and the manufacturer will generally provide small, complimentary samples for field testing.

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