



Dampney

Protective Coatings

Endcor® 700C Series Epoxy-Polyamide Coating High Solids VOC Compliant

Description

Endcor 700C is a tough and chemically resistant polyamide-cured epoxy coating. When applied over Endcor 750C or other suitable primer, it provides long-term corrosion protection for steel and concrete exposed to industrial, chemical and marine environments. It also accepts acrylic or urethane topcoats where improved gloss and color retention are required.

Recommended Uses

- Structural steel
- Concrete
- Piping and tank exteriors
- Machinery and equipment

Features

- Excellent chemical and corrosion resistance
- Outstanding wettability and flowout properties
- Withstands temperatures up to 350°F (177°C)
- Resists fumes and splashes of mineral acids, alkalis and most solvents
- Short recoat time
- Long pot life
- Spray, roller or brush application
- VOC 283 lbs/gal (99.6 g/l)

Not Recommended For

- Aromatic or oxygenated solvents
- Chromic or nitric acid
- Concentrated mineral acids
- Bleaches or oxidizing agents
- Potable water storage tanks

Primer Required

Steel: Apply over properly primed surfaces. Depending upon exposure conditions, suitable primers include Endcor 750C Epoxy Primer, Endcor 400 Wash Primer, Epodur 835 Inorganic Zinc.

Galvanized or Aluminum Surfaces: Apply Endcor 400 Wash Primer to precondition and etch surface.

Concrete and Masonry: Self-priming. Seal porous surfaces, such as lightweight concrete and cinder block, using Epodur 7955 Water-Reducible Epoxy Block Filler.

Previously Painted Surfaces: Self-priming.

Surface Preparation

Prepare surface by methods suitable for exposure and service conditions. If priming is required, follow instructions in appropriate Dampney primer bulletin.

Surface must be clean, dry and free from oil, grease, tar, salts, efflorescence, chalk, loose paint, form oils, release agents, curing compounds, loose mortar, rust, corrosion products, mill scale, or other foreign matter.

Steel: First remove any oil or grease stains by solvent wiping using Dampney 100 Thinner or xylol, or by scrubbing with a hot detergent solution, or by steam cleaning. Use procedures outlined in Steel Structures Painting Council Specification SSPC-SP 1, "Solvent Cleaning". Remove all surface imperfections that will induce premature coating system failure. Chip or scrape off weld splatter. Grind down sharp and rough edges, slivers, gouges, pits and projections. Fill in bad areas with acceptable filler material. Sharp edges and projections are difficult to coat properly and will leave little or no coating to protect the underlying steel. After completion of preliminary surface preparation work blast surface per SSPC-SP 6, "Commercial Blast Cleaning".

Galvanized or Aluminum Surfaces: After completion of preliminary surface preparation work apply one coat of Endcor 400 Wash Primer, per Dampney Bulletin 400, to precondition and etch surface. This step is necessary to ensure optimum adhesion of epoxy primer to topcoat. Do not apply Endcor 700C directly to an untreated surface.

Concrete and Masonry: Remove any oil or grease stains by methods described above, per SSPC-SP 1. Allow new concrete to cure 4 weeks under normal conditions before application of coatings. After removal

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of stains, brush-off blast or acid-etch surface to remove other contaminants. Do not apply coatings to concrete treated with curing compounds unless test patch indicates satisfactory adhesion.

Previously Painted Surfaces: Remove oils and grease stains by methods described above, per SSPC-SP 1. Remove dirt, chalk, and loose paint by power tool cleaning per SSPC-SP 3, or by hand tool cleaning per SSPC-SP 2. Endcor 700C can be applied over most types of tightly bonded, clean, dry coatings. Hard, glossy surfaces should be treated by mild surface abrasion, solvent treatment, or other suitable process to ensure good intercoat adhesion of topcoat. Prior to application to large areas always apply a test patch, allow full cure, and then determine intercoat adhesion by tape pull-off test per ASTM Procedure D-3359.

Mixing

Mixing ratio is 4 parts Part A (Base) to 1 part Part B (activator) by volume. Mix components separately, then combine and mix thoroughly with an explosion-proof power mixer until uniformly blended. Do not mix more material than can be used during the pot life period. Allow 30 minutes induction ("sweat in") period prior to use.

Pot Life

Pot life is 16 hours at 70°F (21°C) and 50% RH. Pot life will vary with temperature and decreases as temperature increases. See Physical Properties section for limitations. Do not apply coating that has aged beyond the pot life limit as spraying characteristics and film integrity may be impaired.

Application Guidelines

Apply by conventional or airless spray, brush or roller. The following equipment, or equivalent, may be used:

Airless Spray:

Pump	Graco Bulldog 30:1
Gun	Graco 205-591, 208-663
Fluid tips*	Graco 163-615, 162-619
Fluid hose	3/8" to 1/2" ID
Air pressure to pump	100 psi
Pump operating pressure	80-90 psi

*Use Reverse-A-Clean® tips for fast, easy clean out. Do not apply by "hot" airless spray as heating shortens pot life.

Conventional Spray:

Spray gun	DeVilbiss JGA-402
Fluid tip	EF
Air cap	704
Atomizing pressure	60 psi
Fluid pressure	25 psi
Air hose*	3/8" ID

*Smaller hose diameter or length over 25 ft. may require increased pressure.

Provide material pot with agitator, regulators for fluid and air pressure, and oil and moisture trap in air supply.

Brush: Use only pure bristle brushes.

Roller: Use only metal- or phenolic-backed, mohair-type roller. Keep roller saturated to obtain correct film thickness. Do not squeegee coating or apply excessive pressure. Cross roll for uniform coverage.

Application Temperatures

Refer to table in Physical Properties section for limitations. To prevent moisture condensation, do not apply primer or finish coat unless surface temperature is 5°F (3°C) above the dew point. Coating will not cure below the minimum surface temperature.

Application Procedure

1. Prior to use, flush spray equipment with Dampney 100 Thinner.
2. Thinning - Use thinners cautiously! Addition of a small amount of thinner will cause a great reduction in coating viscosity. Excessive thinning will cause runs or sags. Thin only with amount necessary to establish proper spray pattern up to a maximum of 1 pint of Dampney 124 Thinner per gallon of coating.
3. For conventional spray use adequate air pressure and volume to obtain proper atomization.
4. Apply one coat of Endcor 750C Primer over properly prepared surface to a dry film thickness of 6-8 mils. Use "crosshatch" method with 50% overlap on each pass to avoid pinholes and bare areas. On irregular surfaces, coat all edges first. Exercise care to prevent sags or runs.
5. Apply Endcor 700C mid coat over properly cured, clean, dry Endcor 750C Primer, or other approved Dampney primer to a dry film thickness of 6-8 mils.
6. Apply Endcor 700C finish coat to a dry film thickness of 6-8 mils. Total system dry film thickness: 12-16 mils.

Curing Time

Dries set-to-touch in 6 hours at 70°F (21°C) and 50% RH. Final curing time will depend upon film thickness, ventilation, temperature, and relative humidity. See Physical Properties section for limitations. Cure time will be extended in areas with poor air circulation or high relative humidity. Force curing with high volume of hot air is recommended in confined spaces.

Recoat Time

Recoat between 12 hours minimum and 48 hours maximum after application of primer, mid coat and finish coat. Higher temperatures will accelerate cure and shorten recoat time. Lower temperature will retard

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cure and lengthen recoat time. See Physical Properties section for limitations.

Storage

Store in a dry place with temperature between 40°F and 85°F (4°C and 29°C).

Cleanup

Thoroughly flush spray equipment and hose immediately after use with Dampney 100 thinner, or other Dampney approved solvent. Dismantle spray equipment. Clean parts, brushes and rollers with Dampney 100 Thinner.

Precautionary Information

WARNING: Flammable Liquid and Vapor

Keep away from heat, sparks and flame. Vapors may cause flash fire. Do not breathe vapors or spray mist. Avoid contact with eyes, skin and clothing. Use with adequate ventilation during mixing and application. Wear an appropriate, properly fitted organic vapor cartridge-type respirator (NIOSH approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Wash thoroughly after handling. Wear protective

gloves, chemical safety goggles and impervious protective clothing. Use skin cream. In confined spaces it is required to use a positive pressure supplied-air respirator (NIOSH approved). Use explosion-proof lights and electrical equipment. Use only nonsparking tools and equipment. Wear only nonsparking footwear. Make certain all electrical equipment is grounded. Observe all safety precautions and follow procedures described in OSHA regulations.

See Material Safety Data Sheet (MSDS) for complete precautionary and disposal information.

If instructions and warnings cannot be strictly followed, do not use this product.

FOR INDUSTRIAL USE ONLY

TECHNICAL DATA

Characteristics	Endcor 700C		
Generic Type	Epoxy-polyamide		
Color	10 standard colors (custom colors available)		
Finish	Semi-gloss		
Number of components	Two		
Mixing ratio by volume	4 Parts A : to 1 Part B		
Percent solids by volume (mixed)	67 (varies with color)		
Weight per gallon (mixed)	13 lbs./gal. (1.21 ± .06 kg./l.)		
Viscosity (mixed)	65-70 Ku		
ASTM B-117 (Salt Fog) with 750LV primer	20,000 hrs		
Temperature resistance Continuous	350°F (177°C)		
Dry film thickness per coat	6 - 8 mils		
Wet film thickness per coat	8 - 11 mils		
Theoretical coverage per gallon*	1,070 mil. sq. ft./gal.		
Application temperatures	Normal	Minimum	Maximum
Ambient air	65-85°F (18-29°C)	50°F (10°C)	100°F (38°C)
Substrate	65-85°F (18-29°C)	50°F (10°C)	120°F (49°C)
Coating material	65-85°F (18-29°C)	55°F (13°C)	90°F (32°C)
Humidity	20-75%	0%	85%
Drying time	At 70°F (21°C)		
To touch	6 hours		
To recoat	24 hours		
Final cure			
Non-immersion service	2 days		
Immersion service	7 days		
Pot life	8 hrs.		
flash point			
Part A (Base)	15°F (27°C)		
Part B (Activator)	81°F (27°C)		
VOC (Volatile Organic Content)	.83 lb/gal (99.6 g/l)		
Shelf life	1 year (unmixed components)		

* **Note:** Actual coverage rate will vary depending upon material losses during mixing and application, and upon type and condition of surface to be coated.

WARRANTY

Dampney protective coating products are expressly warranted to meet applicable technical and quality specifications. The technical data contained herein are accurate at the date of issuance but are subject to change without prior notification. No warranty of current accuracy is hereby given or implied. User must contact Dampney to verify correctness before ordering. Dampney assumes no responsibility for coverage, performance or injuries resulting from handling or use and **LIABILITY, IF ANY, SHALL BE LIMITED TO PRODUCT REPLACEMENT.** In no event will Dampney be responsible for consequential damages, except insofar as mandated by law. Dampney **DISCLAIMS ALL OTHER WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**