



Endcor[®] 835 Inorganic Zinc Rich Primer

Description

An inorganic zinc-rich ethyl silicate based primer, which provides galvanic protection over properly prepared carbon steel surfaces. Contains 85% zinc in the dry film for long term protection.

Recommended Uses

Endcor 835 is recommended for exposed steel in aggressive atmospheres and for both exterior and interior service.

Exterior:

- Stacks, heaters and ductwork
- Chemical Process Industries - structural steel, reaction vessels, heat exchangers, tanks and piping
- Bridges, derricks, cranes and towers
- Preconstruction and fabrication priming

Features

- Galvanic Action utilizes the sacrificial cathodic mechanism for corrosion control of metals nobler than zinc in the electromotive series
- Abrasion Resistance - the film improves in hardness and adhesion upon aging and weathering exposure
- Long Pot Life - Working time of 12 hours at 70°F can be expected after the zinc dust and vehicle are mixed.
- Resistant to hydrocarbon and many other organic chemicals.
- Heat resistant up to temperatures of 750°F (399°C)

Not Recommended for

Endcor 835 is not recommended for exposures to:

- Acids, alkalis and salts which have a pH range outside that of 5-10.
- Salts (satisfactory with topcoats)
- Chlorinated solvents which readily hydrolyze to form hydrochloric acid
- Application to non-ferrous metals

Surface Preparation

Remove all grease and oil by solvent cleaning per Steel Structures Painting Council Specification SSPC-SP1, "Solvent Cleaning."

Steel: For best results solvent clean in accordance with SSPC-SP1 before abrasive blasting to remove all grease and oils from the surface. Abrasive blast surface to SSPC-SP10 (NACE 2) Near-White Blast Cleaning Standard. A sharp angular blast profile of 1.5-2.0 mils is required (35-50 µm). Coat the freshly blasted surface before flash rusting and/or contamination occurs.

Mixing

Base component and Zinc Dust component must be mixed prior to application. Blend zinc dust slowly into vehicle base (liquid component) with continuous mechanical agitation. Mix thoroughly until free of lumps. Pour mixture through 30 mesh screen or nylon mesh bag. If only a partial unit is used, mix by weight 1 parts Base Component with 2.97 parts Zinc Dust Component. Do not agitate Endcor 835 so vigorously that air becomes trapped in the coating.

Pot Life

The pot life of Endcor 835 at 70°F (21°C) is 12 hours after mixing. Always maintain continuous agitation of the mixed components until coating is completely used up.

Application

Apply Endcor 835 by spray. Brush only when coating difficult-to-spray areas or small parts. Coating dry film thickness should be 2.5-3.5 mils (5-6 wet mils (125-150 µm)). When spraying, use a 50% overlap with each pass of the gun.

Application Equipment

Conventional Spray Equipment: Use material as supplied.

As a guide only...

Spray Gun	DeVilbiss P-MBC or JGA
Air hose	5/16" (I.D.)
*Fluid hose	1/2" (I.D.)
Air cap	704
Fluid Nozzle	FF (.055")
Pot pressure	10-15 lbs.
Atomizing pressure	40-45 lbs.
Needle adjustment	Full open
Distance from work	8-10"

Airless Spray Equipment: Use material as supplied.
As a guide only...

Spray Gun	Graco 208-663 Silver Airless
Tip Size	.019 to .025 Reverse-A-Nozzle
Pump	Graco King 45:1
Fluid Hose*	1/2 to 3/4 ID
Air Press. to Pump	40-50 lbs

*Smaller hose diameters, or hose lengths greater than 25 feet may make it necessary to increase pressures

Note: If pump is to be shut down for any reason for more than 10 minutes the gun should be disconnected from the fluid line and the coating circulated through the unit until ready to start spraying.

Thinning

NEVER use more than 1 pint of Dampney 155 Thinner per gallon.

Note: Use of other thinners not approved by Dampney may hinder product performance and void product warranty.

Curing Time

Endcor 835 is an ethyl silicate zinc rich primer which requires atmospheric moisture as part of its curing mechanism. A minimum relative humidity of 35% is required to ensure proper curing. The drying time to film insolubility is dependent on film thickness, temperature, relative humidity, and air circulation. Flow of air over the surface has a pronounced effect in reducing drying time. See Technical Data section for curing data. Fresh or potable water spraying/misting once the coating has air dried is also beneficial in accelerating the curing mechanism or when low humidity conditions are present. Care should be taken not to use a water supply high in chlorides.

Storage

Store in a cool, dry place, preferably below 80°F. Do not store above 100°F.

Clean up

Clean spray equipment, brushes, spillage, etc. with either Dampney 155 Thinner or denatured ethyl alcohol as soon after use as practical to prevent hardening of Endcor 835. Hardened material can be removed from equipment with a 10% solution of caustic soda. *Note:* Caustic solutions will attack aluminum.

Recoating

The coating, usually 30 minutes after application, is resistant to water, rain, or condensation. Endcor 835 requires a minimum of 24 hours at 70°F (21°C) and 50% relative humidity before topcoating. Lower temperatures and lower humidity will extend the minimum recoat time. A mist coat/full coat technique may be required when applying subsequent topcoats.

Precautionary Information

WARNING: FLAMMABLE LIQUID AND VAPOR. VAPOR HARMFUL. CAUSES EYE IRRITATION. VAPOR HARMFUL. Keep away from heat, sparks and flame. VAPORS MAY CAUSE FLASH FIRE. Use only with adequate ventilation. Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. Avoid contact with eyes. Wash thoroughly after handling. 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 warning cannot be strictly followed, do not use this product.

FOR INDUSTRIAL USE ONLY

Shipping Weights	1's
Endcor 835	25.2 lbs.
Dampney 155 Thinner	8 lbs.

*Recommended Topcoats

Thurmalox 200/200C
Thurmalox 230/230C
Thurmalox 225HD
Thurmalox 260/260C and 260C TIC
Thurmalox 280/280C
Thurmalox 884 Series
Endcor 700 & 750C

Technical Data

Characteristics	Endcor 835															
Generic Type	Inorganic Zinc Rich Ethyl Silicate Primer															
Color	Gray															
Finish	Flat															
Number of components	2															
Mix Ratio by weight	1 part 835A to 2.97 parts 835B															
Operating temperature range	Ambient to 750°F (399°C)															
Maximum temperature resistance	750°F (399°C)															
Surface temperature at time of application	40-120°F (0-49°C)															
Percent solids by volume	56															
Dry film thickness per coat	2.5-3.5 mils (63-87 microns)															
Wet film thickness per coat	5.0-6.0 mils (125-150 microns)															
Theoretical coverage at 3.0 mils (75µm) DFT	299 ft ² /gallon (7.4m ² /liter)															
VOC	3.0 Lbs/gal (360 g/l)															
Drying to handle	<table style="border-collapse: collapse; width: 100%;"> <tr> <td style="text-align: center; border-right: 1px solid black;">Temperature</td> <td style="border-right: 1px solid black;">RH above 50%</td> <td>RH 35-50%</td> </tr> <tr> <td style="border-right: 1px solid black;">85-100°F(29-38°C)</td> <td style="border-right: 1px solid black;">6-8 hours</td> <td>12-24 hours</td> </tr> <tr> <td style="border-right: 1px solid black;">60-85°F(16-29°C)</td> <td style="border-right: 1px solid black;">8-12 hours</td> <td>24-48 hours</td> </tr> <tr> <td style="border-right: 1px solid black;">40-60°F(4-16°C)</td> <td style="border-right: 1px solid black;">12-16 hours</td> <td>Up to 48 hours</td> </tr> <tr> <td style="border-right: 1px solid black;">24 Hours Minimum</td> <td></td> <td></td> </tr> </table>	Temperature	RH above 50%	RH 35-50%	85-100°F(29-38°C)	6-8 hours	12-24 hours	60-85°F(16-29°C)	8-12 hours	24-48 hours	40-60°F(4-16°C)	12-16 hours	Up to 48 hours	24 Hours Minimum		
Temperature	RH above 50%	RH 35-50%														
85-100°F(29-38°C)	6-8 hours	12-24 hours														
60-85°F(16-29°C)	8-12 hours	24-48 hours														
40-60°F(4-16°C)	12-16 hours	Up to 48 hours														
24 Hours Minimum																
Dry to recoat at 70°F (21°C) with RH ≥50%	24 Hours Minimum															
Weight per gallon (3.78 liters)	23.20 (mixed)															
Flashpoint (Seta)	57°F (14°C)															
Shelf Life	6 months liquid / 12 months dry 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. Allowance must be made for losses when estimating material requirements. See Bulletin 3110 "Calculating Coating Requirement" for additional information.*

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 subjected 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.