



Endcor[®] 835 Inorganic Zinc Rich Primer

Description

An inorganic zinc-rich ethyl silicate based primer, which provides galvanic protection over properly prepared 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:

- Bridges, derricks, cranes and towers
- Marine - hulls, decks, tanks and superstructures.
- Offshore drilling rings, docks
- Chemical Process Industries - structural steel, reaction vessels and heat exchangers, tanks, piping, stacks
- Preconstruction and fabrication priming

Interior: Endcor 835 is particularly suitable for lining tanks that contain a wide range of petroleum, organic chemicals, and animal/vegetable oil products.

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
- Rapid Curing - permitting recoating within 6-8 hours except under unusual atmospheric conditions. (See curing section for further details)
- Long Pot Life - Working time of 12-16 hours (at 70-90°F) can be expected after the zinc dust and vehicle are mixed.
- Resistant to hydrocarbon and many other organic chemicals.
- Is heat resistant up to temperatures of 750°F

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
- Crude oils with acid numbers above .4 or hydrogen sulfide content above 300 PPM

Surface Preparation

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

Steel: For non-immersion service or for moderately severe environments: For best results surfaces should be free from oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint, and foreign matter. Abrasive blast surface to commercial grade per Steel Structures Painting Council Specification SSPC-SP6, "Commercial Blast Cleaning," or per NACE Specification No. 3.

In preparing steel surfaces, follow the procedure outlined below.

1. Remove all flux, splatter and slag left from welding.
2. Grind all rough welds until smooth
3. Remove any grease, oil or dirt by solvent cleaning per Specification SSPC-SP1, "Solvent Cleaning."
4. Sandblast per specifications outlined above.
5. Remove all remaining abrasive from surface by air blast

Coat the freshly blasted surface as soon as possible. Do not allow it to become wet. Do not wash freshly blasted surface with solvents.

Mixing

Base component and Zinc Dust component must be mixed prior to application. Sift zinc dust slowly into vehicle base 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 is 12-16 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 (7-9 wet mils). When spraying, use a 50% overlap with each pass of the gun.

Bulletin 835

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 self-curing. Moisture however is required to complete the curing reaction. 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. To utilize maximum available air circulation and higher levels of humidity, curing usually proceeds more quickly outdoors than indoors. Water spraying is also beneficial in accelerating the curing mechanism.

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.

The film is not subject to ultraviolet degradation and is extremely serviceable in normal atmospheric weathering exposures.

The cured vehicle is insoluble in a large variety of organic solvents and is serviceable in exposures of fumes, splash, and spills of oils and solvents.

In marine coastal exposures the presence of salt tends to accelerate the sacrificial reaction of the zinc metal in the film. The use of appropriate topcoats reduces the rate of zinc sacrifice thus increasing the protection life of the coating system.

Acid and alkali exposures are aggressive to Endcor 835 films and in such exposures, topcoats such as epoxies and vinyls are recommended. The topcoats prevent chemical attack of the zinc and the zinc in turn prevents under-film corrosion.

Where scheduling is critical, film hardening can be accelerated by an application of water spray or low pressure steam. At very low humidities more than one water application with drying periods in between may be necessary. After such water applications topcoating may proceed as soon as the surface is dry.

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.

Bulletin 835

Endcor 900 Series Acrylic Latex
 Thurmalox 225HD Silicone Copolymer
 Thurmalox® 200 Series Silicone Based Enamels
 Thurmalox 260 Series Silicone Copolymer

Recommended Topcoats

Endcor 300 Series Vinyls
 Endcor 600 Series Chlorinated Rubber
 Endcor 700 Series Epoxy

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	32-150°F (0-66°C)		
Percent solids by volume	56		
Dry film thickness per coat	2.5-3.5 mils (63-87 microns)		
Wet film thickness per coat	7-9 mils (175-225 microns)		
Theoretical coverage per gallon*	642 mil. Sq. ft. 15.75 sq. m. per liter		
Drying time	Temperature	RH above 50%	RH 20-50%
	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
	0-40°F(-18-4°C)	16-24 hours	48 hours
Weight per gallon	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.

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