7N-160 C-POX® ST160 MP

Surface tolerant multifunctional modified epoxy

Revision: February 2017

DESCRIPTION

C-Pox ST160 MP is a 2 component multipurpose modified epoxy. Its main properties are:

- Finishing coat for the inside of steel wind turbines.
- Resistant to fresh and salt water.
- Can be applied over mechanically cleaned steel surfaces and suitably prepared concrete.
- Good adhesion to most existing paint systems.
- Cures at temperatures below 0ºC.
- Where necessary, C-Pox ST160 MP can be overcoated with a wide range of finishing paints.
- Product with CE marking.

MAIN APPLICATIONS

C-Pox ST160 MP is a specially formulated high performance coating for highly corrosive industrial installations and paint systems for the inside of wind turbines. On steel and concrete structures under condensation and aggressive conditions, C-Pox ST160 MP has good resistance to acid and alkaline fumes and splashes, solvents and to fresh and salt water.

PROPERTIES

Finish	Satin
Colour	White, Off White, other colours on request Surface discoloration may occur in direct exposure to bad weather, ultraviolet rays, high temperatures, chemical products, etc… but the performance of the product will be unaffected.
Components	2
Mixing ratio (by volume)	Resin 7N-161 4 parts Hardener 7N-162 1 part
Pot life	5 hours at 20ºC The pot life of the mixture depends on the temperature and quantities mixed.
Volume solids	68% (ISO 3233) Slight variations ±3% may occur due to colour and testing variances.
Specific weight	1.35 g/mL
Dry film thickness	100 – 200 µm per coat
Nº of coats	1 – 3 Depending on application method

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Application method

Conventional and airless spray.

Theoretical coverage

6.8 m²/L at 100 µm
Allow for application losses, surface irregularities, etc.

Drying times

At 125 µm:

	10ºC	20ºC	30ºC
Dry hard	12 hours	10 hours	7 hours
Fully cured	7 days	6 days	5 days
Recoat (min)	6 hours	4 hours	3 hours
(max)	With epoxies: 4 weeks		
	With polyurethanes: 1 week		

Drying times depend on air temperature, ventilation and film thickness.

SURFACE PREPARATION

Steel – Remove all dirt, grease or other contaminants. The choice of surface preparation will depend on the system selected and end-use service conditions.
For more severe service and immersion, clean to Sa 2½ ISO 8501-1. Blast to achieve a surface profile of 50 – 75 microns.
Water Jetting - Must be water blasted to high pressure NACE N.0.5/SSPC-SP12WJ-2L/SC1.The wet surface can be dried by blowing with dry compressed air giving special attention to horizontal surfaces and recesses.
Abrasive wet blasting according to SSPC VIS 5 /NACE VIS 9 to minimum degree CWAB-6 DWAB-6 (equivalent to Sa 2), advisable CWAB-10 DWB-10 (equivalent to Sa 2 1/2).

Aluminium – Remove oil, grease or soap film with neutral detergent or emulsion cleaner. Blast lightly with fine abrasive.

Concrete – Light abrasive blast to remove all chalk, and surface glaze or laitance. If blasting is not possible, acid etch uncoated concrete to obtain a glaze-free surface with a slightly granular texture. Rinse with clean water and allow to dry thoroughly. After blasting or acid etching, fill the small holes or voids with material.

Aged coatings – All surfaces must be clean, dry, tightly bonded and free of loose paint, corrosion products or chalky residue. Abrade or clean the surface.
C-Pox ST160 MP is compatible over most types of properly applied and tightly adhering coatings, however a test patch is recommended to confirm compatibility.

Repair – Prepare damaged areas to original surface preparation specifications, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch-up.

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APPLICATION

Add cure to resin solution and stir material for 5 minutes. In confined areas ventilate with clean air during application and drying until solvents are removed.

Environmental applications:

Air temperature	10 - 50ºC
Relative humidity	0 - 85%
Minimum surface temperature	3ºC above dew point

Application equipment

Conventional spray	Recommended
Fluid tip orifice size	0.070 – 0.086 inches (1,77 – 2,18 mm)
Air pressure	3.1 – 5.3 kg/cm^2
Fluid pressure	3.1 – 3.9 kg/cm²
Thinning	0 – 10 %

Airless spray	Recommended
Fluid tip orifice size	0.019 – 0.023 inches (0,48 – 0,58 m)
Compression ratio	30 : 1 / 45 : 1
Working pressure	150 - 170 kg/cm^2
Thinning	0 – 5 %

Thinner: 7S-902 (CP-40); Cleaning thinner: 7S-902 (CP-40)

ADDITIONAL INFORMATION

Drying mechanism – By solvent evaporation and chemical reaction between the components

Volatile Organic Compounds (VOC)
EU limit for the product (cat. A/j): 500 g/L
Maximum VOC content 364 g/L (TVOCC: 28%) *)
Supply form: < 314 g/L (TVOC: < 23%)
COV Resin: 306 g/L (TVOC: 21%)
COV Cure: 350 g/L (TVOC 35%)
COV Thinner: 863 g/L (TVOC: 100%)
COV Cleaning thinner: 863 g/L (TVOC: 100%)

*) The VOC value shown above refers to a ready for use product, as tinted, thinned, etc in accordance with our recommendations. We are not responsible for products obtained by mixing products with are different from those we have recommended and we must draw attention to the responsibility of anyone involved within the supply chain not to infringe Directive 2004/42/CE.

Flashpoint (Closed container)

Resin	42ºC
Hardener	41ºC
Thinner	16ºC
Cleaning thinner	16ºC

Supply form

Resin	16 L
Hardener	4 L

Shelf life
Stored in original containers, indoors, between 5 and 40ºC, resin: 2 years, cure: 1 year.

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PAINT SYSTEMS

Steel
C-Pox ST160 MP can be applied directly over surface or over zinc or zinc phosphate epoxy primers as C-Pox Primer ZN650, C-Pox Primer ZN800 or C-Pox Primer ZP200 HB.

Concrete
Apply 2 coats of C-Pox ST160 MP

In immersion situations, over steel or concrete, must be applied 2 – 3 coats with a minimum total dry thickness of 400 µm.

APPROVALS AND CERTIFICATES

The paint system comprising C-Pox Primer ZN650 and C-POX ST160 MP, is approved for painting the inside of steel wind turbines by OTEC reference 07826 B of 19 January 2009
Corrosivity category C4 according to EN ISO 12944-6, high durability of painting system:
C-Pox Primer ZN650 50 µm
C-Pox ST160 MP 100 µm

Corrosivity category C4 according to EN ISO 12944-6, high durability of painting system:
C-Pox ST160 MP 150 µm

CE MARKING

CE Marking of this product is the evidence given by CIN that this product is subject to the provisions of Community Directives of the Construction Products that are applicable (European Regulation nº305/2011 and the European Standard EN 1504-2. “Products and Systems for the protection and repair of concrete structures. Principle 5. Physical resistance / Surface improvement. This product conforms to the requirements of Annex ZA.

CE

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EN 1504-2

Products for the superficial protection
Physical resistance

Abrasion resistant	< 2 g
Impact resistance	≥10 Nm (Class II)
Water permeability	w < 0,1 kg/($m^2h^{0,5}$)
Traction adherence	> 2,0 N/mm^2
Dangerous substances	Complies with a 5.3 clause of EN 1504-2 Norm.

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HEALTH, SAFETY AND THE ENVIRONMENT

In general, avoid contact with the eyes and skin; gloves, goggles and appropriate clothing should be worn. Keep out of the reach of children. Use only in well ventilated areas. Do not empty into drains. Keep the container properly sealed and stored in the correct place. Take correct measures when transporting the product so as to avoid any accidents that could rupture the can or cause damage to the packaging. Ensure that the container is correctly stacked in a safe area. Do not store or use the product in extreme temperature conditions. Always take account of the appropriate legislation relating to the environment and Health and Safety at Work. **For more information it is essential to read the label on the container and the product MATERIAL SAFETY DATA SHEET of this product, its components and all complementary products referred on Technical Data Sheet.**

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