



# Nap-Gard®

## 7-2719

# Rebar Fusion Bonded Epoxy

Revised: 6 March 2014

### DESCRIPTION

Nap-Gard® Product No. 7-2719 Rebar FBE is a thermosetting epoxy powder designed to coat reinforcing steel rebar to provide corrosion protection. This material is designed for application to straight bars that are subsequently bent. This product gives little cobwebbing when sprayed on multi-bar lines and is more damage resistant than our first generation of rebar coatings. It has been certified to meet requirements of A775 and AASHTO M-284 by Independent Labs.

### TYPICAL POWDER PROPERTIES

<b>Color:</b>	Green	<b>Theoretical Coverage:</b>	152 Ft <sup>2</sup> /lb/mil
<b>Specific Gravity:</b>	1.27 ± .05		
<b>Typical Gel Time:</b>		@205°C	@232°C
ASTM D-3451-92	Fast	6-8 seconds	4-5 seconds
	Standard	8-10 seconds	7-8 seconds
	Long	14-18 seconds	9-10 seconds
<b>Shelf Life*:</b>	6 months	6 months	12 months
@ 25°C (77°F)			

Note: At recommended storage conditions.

### TYPICAL PROPERTIES OF APPLIED FILM†

<u>TEST / REQUIREMENT</u>	<u>METHOD</u>	<u>CRITERIA</u>	<u>RESULT</u>
Flexibility	D.P.C. 10.227	@ 7-11 mils	Pass 4d bend on #4 bar (@23°C)
Knoop Hardness Number	A.A.S.H.T.O. M284 a.1.4.8 (must exceed 12)	@ 10 mils	15.0 average
Chemical Resistance Test*	ASTM G20	45 days @ 24°C (75°F) in 3 Molar NaCl and 7% NaCl	

\*No holidays developed, there was no softening, blistering or loss of bond at intentional holiday.

### TESTING OF COATING TO A775-97 (Annex A1)

<b>8.1 Film Thickness</b>	90% of readings / 7-12 mils	7.6-12.2 (avg. 10.8) mils	
<b>A1.2.5 Flexibility</b>	(Bend #6 rebar/round 6 in. mandrel)	No cracking on outside radius	Pass, no cracking @ 24°C
<b>A1.2.7 Abrasion Resistance</b>	ASTM D4060-95 / CS17, 1 Kg weight, 1000 cycles	<100 mg removal per 1000 cycles	14 mg average removal

# Technical Data Sheet

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<b>A1.2.8 Impact Test</b>	ASTM G14 9 Nm (80in/lb)	No cracking /shattering except @ impact area	No cracking/shattering
<b>A1.2.2 Cathodic Disbondment</b>	7 days, 1.5V, 3%NaCl, 23°C	<4.0 mm avg. Disbondment	3.2 mm avg. radial Disbondment
<b>A1.2.3 Salt Spray</b>	800 hours, ASTM B117	<3.0 mm avg. Disbondment	2.1 mm avg. radial Disbondment
<b>A1.2.5 Chloride Permeability</b>	FHWA A-RD-74-18	<1.0x1.04 moles/liter	1.3x10 <sup>5</sup> moles/liter
<b>A1.2.6 Relative Bond Strength To concrete</b>	ASTM A944	>85%	121% relative bond strength
<b>Chemical Resistance</b>	ASTM G 2- 45 days @ 70°F (21°C), in distilled water, 3 Molar CaCl <sub>2</sub> , 3 Molar NaOH, Saturated Ca (OH) <sub>2</sub> . For holidays developed, there was no softening, blistering or loss of bond at international holiday.		

## GENERAL APPLICATION PARAMETERS

**Surface Preparation** Clean the surface of the steel reinforcing bar by abrasive blast cleaning to a near white finish in accordance with SSPC-SP10 or to NACE #2. The cleaning shall remove all visual mill scale, rust and other foreign matter, and shall achieve a uniform anchor profile of 2.0-4.0 mils over the surface of the bar.

## CURE SCHEDULE GUIDELINES

**Cure Specifications:** Nap-Gard® 7-2719 Rebar FBE coating cures by residual heat:

- Pre-heat the bars to 425°F (218°C) to 463°F (239°C) [Depending on bar size].
- Apply Nap-Gard® 7-2719 powder coating to the film thickness required by electrostatic spraying.
- Minimum time to quench is 27 seconds for fast gel version, 30 sec for standard gel version and 40 seconds for long gel version @ 463°F (239°C) application temperature\*\*

Guideline booth exit temperatures for the 7-2719 coatings are as follows:

- No. 3-6 bar 425°F- 435°F
- No. 7-10 bar 415°F - 425°F
- No. 11-18 bar 400°F - 415°F

**\*\*CAUTION\*\*** Time to quench will vary with application parameters and rebar sizes. Therefore, the above information shall be used only as a guideline by the applicator to develop proper time to quench. Cure should be verified by DSC or other methods.

Always consult product Material Safety Data (MSDS) prior to handling.

**WARRANTY POLICY:** Axalta Powder Coating Systems USA, Inc. ("Seller") certifies that all coatings delivered to Customer in unopened factory filled containers meet all pertinent quality standards presented in Seller's current published literature. Since matters of surface preparation, application procedures, curing procedures and other local factors that affect coating performance are beyond Seller's control; Seller assumes no liability for coating failure other than to supply replacement material for coating material proven to be defective. Customer will determine suitability of this product for its use and thereby assumes all risks and liabilities in connection therewith. Seller will not be liable for any injuries, damages or other losses derived, directly or indirectly, from or as a consequence of Customer's use of the product. **SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, RELATING TO ITS PRODUCTS AND THEIR APPLICATION, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES.**

