



**PRODUCT NUMBER:** 7-2610

**DESCRIPTION:** Nap-Rock Dual Powder System

**Introduction:**

*This superior thermoset system is designed to provide excellent damage resistance to pipelines in the toughest environments including river and road crossings and rocky, mountainous terrain.*

*Excellent abrasion and impact resistance combined with good flexibility makes this product unique in providing protection against possible damage to FBE during pipe transportation, and pipeline construction.*

*This Dual Powder System consists of a thermoset topcoat, Nap-Gard® 7-2610, designed to be applied directly to one of the Nap-Gard corrosion protection Fusion Bonded Epoxy Systems, 7-2500, 7-2501, 7-2508STD/LG, 7-2514STD/LG or 7-2805.*

**POWDER PROPERTIES**

<b>Color:</b>	Gray	<b>Theoretical Coverage:</b>	122.5 Ft <sup>2</sup> /lb/mil
<b>Specific Gravity:</b>	1.57 ± .05	<b>Typical Gel Time: @ 204°C (400°F) CSA Z245.20-06</b>	
<b>Density: CSA Z245.20-06</b>	1570 ± 50 g/L	<b>Standard Gel Version:</b>	10 ± 2 Seconds
		<b>Long Gel Version:</b>	26 ± 5 Seconds
<b>Thermal Characteristics: CSA Z245.20-06</b>	T <sub>g1</sub> = 59 ± 6°C T <sub>g2</sub> = 104 ± 4°C Δ H = 50 ± 20 (J/g)	<b>Shelf Life @ 25°C (77°F):</b>	*12 months

\*Transportation: If the recommended time or temperature is exceeded during transportation or storage, the product should be re-certified.

**TYPICAL PROPERTIES OF APPLIED FILM**

**Recommended Film Thickness:**

This is selected based on the size and wall thickness of the pipe. Heavier film thickness required for more demanding environments such as road crossings. Consult Nap-Gard® Specialist for specific recommendations.

Base Coat – Listed above                    250µm (10 mils) Average  
[This can vary from 200µm (8 mils) to 500µm (20 mils)]  
Top Coat – 7-2610 STD or LG                375µm (15 mils) Average  
[This can vary from 300µm (12 mils) to 875µm (35 mils)]

**Taber Abrasion:**                                55 mg removal  
(C17 wheel, 1Kg, 5000 Cycles)

**Impact Resistance:**                        Pass 9.5J @ 38 mils  
@-30°C (-22°F)  
CSA Z245.20-06

**Compressive Strength:**                    >10,000 psi  
ASTM D695-97

**Tg of Cured Film:**  
By DSC-CSA Z245.20-06 (T<sub>g</sub>):            106 ± 6°C  
By DMA:    118°C

**Tensile Strength:** Strength at break 6,470 psi, elongation 4.9%  
ASTM D2370

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**Bending:**  
@-30°C (-22°F) 2.0°/pipe dia. (@30 mils total) Pass  
CSA-Z245.20-06  
Note- Flexibility will be lower at higher film thickness.

**Cathodic Disbonding:**  
CSA Z245.20-06  
28 days, 25°C, 1.5 V, 3% NaCl soln. 3 – 5 mm radial Disbondment Pass  
24 h. 65°C, 3.5 V, 3% NaCl soln. 2 – 3 mm radial Disbondment Pass

**Water/Soak Adhesion:**  
CSA Z245.20-06  
75°C, 24 h Rating of 1 Pass  
75°C, 28 days Rating of 1 Pass

**Gouge Resistance (Partech Test):** 50 kg weight, gouge depth 14 mils Pass, no holidays  
@ 1300µm (52 mils) total, 23°C 75 kg weight, gouge depth 34 mils Pass, no holidays  
R-33 Blank (smooth)

**Thermal Conductivity:** 0.23 ± 0.02 BTU/hr./ft<sup>2</sup>/ft./°F  
ASTM C177

**Shear Adhesion ASTM D1002-94:**  
Average 5363 psi

#### TYPICAL ELECTRICAL PROPERTIES

**Dielectric Strength:** 1000 volts/mil **Breakdown voltage:** >20000 volts@650 µm (26 mils) total  
ASTM D149-97 ASTM D149

**Dielectric Constant:** 4.04 at 1 MHz **Volume Resistivity:** 1.26 X 10<sup>16</sup> ohm-cm.  
ASTM D150 ASTM D257

#### GENERAL APPLICATION PARAMETERS

**Cleanliness:** Near White (NACE #2) or Swedish Standard Sa 2½.  
**Profile:** Grit blast to angular profile 50 µm (2.0 mils) to 112 µm (4.5 mils)  
**Application:** Preheat pipe to 232°C to 253°C (450°F to 488°F)

Apply Nap-Gard base coat followed by Nap-Gard 7-2610 using electrostatic spray or flocking application. Water quench after allowing sufficient time for proper cure. For line pipe, apply 7-2610 in-line before base coat has gelled. Base coat must be at or above 425°F to apply 7-2610. The use of a separate reclaim system is recommended. Coating of girth welds and fitting – see separate application guideline recommendations.

#### GEL TIME & CURE SCHEDULE GUIDELINES

Follow the cure schedule of the base coat. However, a minimum 90 seconds at 425°F or higher is needed for proper cure.

[Note: Quench time will vary with application parameters and pipe sizes.]

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