



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

Color:	Gray	Theoretical Coverage:	122.5 Ft ² /lb/mil
Specific Gravity:	1.57 ± .05	Typical Gel Time: @ 204°C (400°F) CSA Z245.20-06	
Density: CSA Z245.20-06	1570 ± 50 g/L	Standard Gel Version:	10 ± 2 Seconds
		Long Gel Version:	26 ± 5 Seconds
Thermal Characteristics: CSA Z245.20-06	T _{g1} = 59 ± 6°C T _{g2} = 104 ± 4°C Δ H = 50 ± 20 (J/g)	Shelf Life @ 25°C (77°F):	*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 (Tg): 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):
@ 1300µm (52 mils) total, 23°C 50 kg weight, gouge depth 14 mils Pass, no holidays
R-33 Blank (smooth) 75 kg weight, gouge depth 34 mils Pass, no holidays

Thermal Conductivity:
ASTM C177 0.23 ± 0.02 BTU/hr./ft²/ft./°F

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 10¹⁶ 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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