



Nap-Gard®

7-1888

Red High Temp Two-Part Epoxy

Revised: 2 May 2017

DESCRIPTION

Nap-Gard® 7-1888 pipe coating is based on the latest Zero VOC Novalac Technology. The product cures to a highly cross-linked coating for high temperature service in the Oil and Gas Industry [cathodic disbonding resistance up to 150°C (302°F)].

Nap-Gard® 7-1888 is available in Brush Grade and Spray Grade, and is also available in Cartridges for coating repair of Nap-Gard® 7-2555.

ADVANTAGES & USES

Advantages

- 100% Solids – No VOCs.
- Isocyanate free.
- Excellent resistance to high temperature cathodic disbonding up to 150°C (302°F).
- Excellent adhesion to grit blasted steel surfaces, Fusion Bond Epoxy(FBE) and Fiber Reinforced Plastic(FRP).
- Excellent impact resistance.
- Good flexibility.

Uses

- Internal lining for pipelines.
- Exterior coating for pipe, valves and fittings used in buried or immersed service.
- Coating of pipe, valves and fittings.
- Slip bore and directional drilling applications
- Girth weld coatings.

APPLICATIONS

Spray Grade:	Graco Hydra-Cat (Tip Size: .019 - .031)
Brush Grade:	Brush or Roller
Cartridge:	Manual Dispenser

Surface Preparation

Steel Substrate:	
Cleanliness:	Near White
Standards:	NACE 2, Sa 2½ (Swedish Scale, ISO 8501-1), SSPC SP-10 (The Society for Protective Coatings)
Profile:	62.5 microns minimum to 125 microns maximum (2.5 mils to 5.0 mils)

FBE:	
Profile:	62.5 microns (2.5 mils) minimum.

Mixing Ratio

Spray Grade or Brush Grade, By Volume: 3 Parts Base to 1 Part Hardener
 Cartridge, By Volume: 2 Parts Base to 1 Part Hardener

Hose Bundle

Heated hose bundle consisting of 3/8" ID base and 1/4" ID hardener line with 1/4 solvent flush line outside of the bundle. Glycol heat trace or equivalent capable of 80°C (176°F).

*Insulated whip hoses not recommended for glycol heat trace

Tip Size

.019 - .033

Recommended Spray Preheat Temperatures in Drum/Pail

Base:	70°C (158°F) to 80°C (176°F).
Hardener:	20°C (68°F) to 30°C (86°F) (Ambient-typically not heated)



Pre-heating of the base material is required to balance the viscosity of the base and hardener.
In case of extreme weather conditions the recommended temperatures may change, please consult your Axalta representative.

Recommended Film Thickness

Standard Corrosion Protection: 0.75 mm minimum to 1.25 mm (30 mils to 50 mils).
Direction & Mechanical Protection: 1.00 mm minimum to 1.78 mm (40 mils to 70 mils).
Depends on application; consult with your Axalta representative.

Re-Coat Interval

Brush Grade

@25°C (77°F) Maximum: 4 Hours
@80°C (176°F) Maximum: 25 Minutes

Spray Grade

@25°C (77°F) Maximum: 3 Hours
@80°C (176°F) Maximum: 5 Minutes

Backfilling

Mechanical stress including backfilling or lowering in, should not be applied to the coating until it has reached a Shore D Hardness ≥80.

Compatibility with Other Anticorrosion Coatings

Nap-Gard® 7-1888 is compatible with all Axalta Nap-Gard® liquid pipe coatings and fusion bonded epoxy (FBE) anticorrosion coatings. For compatibility with other anticorrosion coatings, please consult with Axalta representative.

HANDLING PROPERTIES

Pot Life (Brush Grade)

100 gm (3.5 oz) mass @25°C (77°F): 30 Minutes

Gel Time (Spray Grade)

200 gm (7.0 oz) mass, Base 70°C (158°F); Hardener 25°C (77°F): 2.25 Minutes

Dry Time (ASTM D1640)*

	Brush Grade	Spray Grade
Touch Dry Time	75 Minutes	1 Hours
Dry Time	4.5 Hours	4 Hours

*Determined at 0.60 mm (25 mils) coating thickness @25°C (77°F)

Ambient Temperature

Brush Grade, Spray Grade or Cartridge: -40°C to 50°C (-40°F to 122°F)

Substrate Temperature

The acceptable substrate (metal surface) temperature range for the application of Nap-Gard® 7-1888 is 10°C (50°F) to 100°C (212°F). Preheating of the substrate is required if the surface to be coated is below 10°C (50°F). The substrate temperature must be a minimum of 3°C (5°F) above the dew point temperature before proceeding with the coating operation. Post-heating may also be required when over-coating polyolefin substrates. Refer to the Curing Table.

Storage/Shelf Life

Store in a cool, dry, well-ventilated area at temperatures between 5°C (41°F) and 40°C (104°F). Keep the lids sealed when not in use. The Shelf Life is a maximum of 24 months from the date of manufacture if the materials are in unopened containers

LIQUID PROPERTIES

	Base	Hardener
Appearance	Red Viscous Liquid	Amber Liquid
Solid Content (%)	100	100
Specific Gravity (ASTM D1475)	1.47 ± 0.03	1.05 ± 0.03
Specific Gravity (ASTM D1475)	Base & Hardener Mixed:	1.37 ± 0.03
Coverage (Theoretical)	Base & Hardener Mixed: 39.0 m ² /Liter/25 microns; 1604 ft ² /US Gallon/Mil	

Always consult product Safety Data Sheet (SDS) 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.**



PHYSICAL/MECHANICAL/ELECTRICAL PROPERTIES

Adhesion to Steel

- Dry Adhesion (Pull-off Strength) [MPa (psi)](ASTM D4541-95-A4): 28 (3995)
(Self-Alignment Adhesion Tester, Type IV)[25°C (77°F)]
- Wet Adhesion (Hot Water Soak) (CSA Z245.20-10, Clause 12.14, 28 days): Rating #1
[95°C (203°F)]
- Wet Adhesion (Hot Water Soak) (CSA Z245.20-10, Clause 12.14, 120 days): Rating #1
[75°C ± 3°C (167°F ± 5°F)]

Cathodic Disbondment

- CSA Z245.20-10, Clause 12.8, System 1A, 28 days; Average Radius (mm): 4.7
[120°C (248°F)]. Test modified using an autoclave with a pressure of 50 psi
- CSA Z245.20-10, Clause 12.8, System 1A, 28 days; Average Radius (mm): 9.17
[150°C (302°F)]. Test modified using an autoclave with a pressure of 100 psi

Hardness (Shore D)

- ASTM D2240-91 [25°C (77°F)]: 85

Impact

- CSA Z245.20-10, Clause 12.12 [21°C (70°F)][Joules(ft-lbf)]: 4.0(2.95)
- CSA Z245.20-10, Clause 12.12 [0°C (32°F)][Joules(ft-lbf)]: 3.05(2.25)

CHEMICAL RESISTANCE (ASTM G20) (90 days immersion @ ambient temperature)

Ammonium Chloride, 10% solution	No change observed
Ammonium Hydroxide, 10% solution	No change observed
Benzyl Alcohol	No change observed
Bio Diesel	No change observed
Calcium Chloride, 10% solution	No change observed
Diesel	No change observed
Ethanol	No change observed
Formaldehyde, 37% solution	No change observed
Gasoline	No change observed
Hydrochloric Acid, 5% solution	No change observed
Jet Fuel	No change observed
Mineral Oil	No change observed
MEK	No change observed
Methanol, 50% solution	No change observed
MIBK	No change observed
Monoethylene Glycol	No change observed
Naphtha	No change observed
Nitric Acid, 5% solution	No change observed
Potassium Chloride, 10% solution	No change observed
Sodium Carbonate, 10% solution	No change observed
Sodium Chloride, 10% solution	No change observed
Sodium Silicate solution	No change observed
Sodium Hydroxide, 10% solution	No change observed
Sulphuric Acid, 5% solution	No change observed
Toluene	No change observed
Xylene	No change observed
Zinc Sulphate, 10% solution	No change observed

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SAFETY

Read the Material Safety Data Sheets before use.

CURING TABLE

Substrate Temperature	Dry Hard Curing Time	
	Brush Grade	Spray Grade
90°C (194°F)	5 min.	4.5 min.
80°C (176°F)	13 min.	7 min.
70°C (158°F)	30 min.	15 min.
60°C (140°F)	60 min.	42 min.
50°C (122°F)	2 hrs.	1.5 hrs.
40°C (104°F)	2.45 hrs.	2.5 hrs.
30°C (86°F)	3.5 hrs.	3 hrs.
25°C (77°F)	4.5 hrs.	4 hrs.
20°C (68°F)	5 hrs.	4.5 hrs.
10°C (50°F)	14 hrs.	13 hrs.

- Substrate: 12 mm (0.5 inch) Thick Steel Panels
- Brush Grade Material Temperature: Base and Hardener: 25°C (77°F)
- Spray Grade Material Temperature: Base: 80°C (176°F)
Hardener: 25°C (77°F)
- Dry Film Thickness: 0.75 mm (30 mils) DFT as per ASTM D1640
- Spray Grade Material Temperature: Base: 80°C (176°F)
Hardener: 25°C (77°F)

Note: The information above is to serve as a guide only. The test results were compiled under laboratory-controlled conditions. Field results May vary due to variable conditions such as radiant heat loss and the cooling effects of wind.

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