

Nap-Gard®

7-0015

Tan Internal Pipe Coating FBE

Revised: 10 October 2022

DESCRIPTION

Nap-Gard® 7-0015 is a fusion bonded epoxy powder designed to provide reliable corrosion protection in severe down hole environments. Nap-Gard 7-0015 is formulated to provide an excellent flexibility and reliable corrosion protection for different line pipes and pumps. Nap-Gard 7-0015 is generally recommended for use over a phenolic primer (Nap-Gard 7-1808 Red Phenolic Liquid Primer) †.

TYPICAL POWDER PROPERTIES

Color: Tan Theoretical Coverage: 113 Ft²/lb./mil

Specific Gravity: 1.70 ± 0.05 **Density:** $1700 \pm 50 \text{ g/L}$

CSA Z245.20-22

Typical Gel Time: 55 ± 11 seconds **Shelf Life:** 18 months

CSA Z245.20-22 Below 25°C (77°F) @ 205°C (401°F) and 50% RH

TYPICAL PROPERTIES OF APPLIED FILM^{††}

Recommended FilmAverage $500\mu m$ (20 mils)ThicknessMinimum $250\mu m$ (10 mils)

Glass Transition Temperature (Tg₃)

~110°C (230°F)

DSC

TEST / REQUIREMENT METHOD CRITERIA RESULT Bending CSA Z245.20-22 >5.8°/dia. Length @25°C **Pass Hardness ASTM D2583** Barcol 69 Average **ASTM D2240** Shore D 88 Average **ASTM D4060** C17 wheel, 1Kg, 1000 **Taber Abrasion** 87 mg removal Cycles

AUTOCLAVE TESTING (Saudi Aramco 09-SAMSS-091)

Wasia Water Service

Wasia water

 Gas Phase
 Temperature
 Pressure
 Duration
 Results

 100% CO2
 95°C (203°F)
 3000 psi
 24 Hrs.
 Pass all phases

No blisters

<u>Aqueous Phase</u>

No cracking

No adhesion loss
No delamination
No swelling

Brine Reinjection Wet, Sour Gas or Crude

Gas PhaseTemperaturePressureDurationResults3 mole% CO2, 3 mole%95°C (203°F)3000 psi24 Hrs.Pass all phases

 H_2S 94% mole% Methane Solve psi 24 mis. Pass all phases No blisters

Aqueous Phase
Aqueous Phase
Formation water brine
No cracking
No adhesion loss
No delamination
No swelling



RECOMMENDED APPLICATION PARAMETERS

Surface Preparation NACE #1 White Metal SSPC SP-5

Swedish Standard Sa 3

Anchor ProfileRecommended Range1.5 mils (38μm) - 3.5 mils (89μm)

Nominal 2.5 mils (64µm), sharp, dense

Liquid Phenolic Primer Recommended Range 0.5 mils (13µm) - 1.0 mils (25µm)

Dry Film Thickness

Cured Powder Film Thickness Recommended Range 10 mils (250μm) - 20 mils (500μm)

Preheat Temperature Recommended Part Surface 375°F (191°C) - 425°F (218°C)

Temperature Range

Cure ScheduleRecommended Oven Temperature375°F (191°C) – 20 min

Time Required for Full Cure 400°F (205°C) – 15 min

425°F (218°C) - 12 min

TRANSPORTATION AND STORAGE

The material is stable during transportation and storage at temperatures below 25°C (77°F) and 50% RH.

Always consult product Safety Data Sheet (SDS) prior to handling.

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