Technical Data Sheet

TAFF ® 817

Product Description

TAFF® 817 is a one-component, heat- cured, thermosetting modified novolac epoxy powder coating suitable for internal coating of tubing & casing. It has excellent anti-corrosion performance, mechanical properties and excellent paraffin and scale proof effects.

Recommended Use

With TAFF®-523 as the primer, TAFF® 817 is designed for the internal coating of tubing, casing and gathering and transportation line pipes, which has excellent corrosion resistance performance. The coating has outstanding toughness and can be applied 800-1000um thick, so that the coating has good thermal insulation performance. The smooth coating surface can effectively prevent paraffin and scale built up on the inner wall of the tubing and extend the service life. The maximum operating temperature is 95 ℃.

Material Properties

	Test Result	Test Method
Gel time (190℃)	9 0-160 s	ISO 8130-6
Curing time (202±3℃)	60 min	ASTM D4217
Density (g/cm ³)	1.5 0 ±0. 1	ASTM D 795
Particle size distribution 150μm on screen	≤3%	ASTM D 1921
Particle size distribution 250μm on screen	≤0.2%	ASTM D 1921
Coating coverage	25m2 / kg(25μm)	
Moisture content	≤0.5%	ASTM D4017
Color	Blue, Grey	Visual
Heat release	30 - 50 J/g	CAN/CSA 245.20
Thermal properties Tg2	1 00℃-110℃	CAN/CSA 245.20

Coating Properties

	Test Result	Test Method
Bending resistance 0℃, 3° /PD, 10 ℃ , 3.75°/PD 25 ℃ , 5.5°/PD	No cracks	NACE RP0394 Appendix H

Wear resistance CS17, 1000g, 1000rpm CS17, 1000g , 5 000rpm	 ≤ 50mg ≤ 180 mg	 STM D4060
Impact strength (300-400μm, -30℃)	> 5J	ASTM G14
Adhesion strength at 73℉(23℃)	≥4500psi/ cm^2	ASTM D 4541-09
Hot water immersion (95℃, 3 0d)	Level 1	NACE RP0394 Appendix J
Oil-water mixture immersion (80℃, 30d)	Level 1	
Simulated seawater immersion (95℃, 30d)	Level 1	
Autoclave test (Temperature: 100ºC/212°F, Pressure:4400 psi/30 MPa, 3% NaCl, Duration: 168 hours)	Pass	NACE TM 0185-2006
Interface Porosity	Level 1	NACERP0394 Appendix G
Cross-section Porosity	Level 1	NACERP0394 Appendix G

Surface treatment

1. The surface to be coated shall be dry, clean and with no contamination. Heat cleaning can be adopted when necessary to remove the oxide skin, oil and grease.
2. Sand blasted till Sa2.5 (ISO 8501-1:2007/SSPC-S10). Surface profile shall be between 35-100 um.

Application Condition

1. Recommended application environment temperature shall be between 5℃~40℃, otherwise coating shall be re-evaluated to ensure the performance of the coating.
2. Recommended application environment relative humidity shall be less than 85%, otherwise application shall not proceed until measures are taken to reduce the relative humidity.

Application Method

1. Primer shall be applied with high-speed rotary cup spraying;
2. TAFF® 817 should be applied with vacuum adsorption or venturi pump method.

Application Parameter

1. Primer shall be cured under 180℃~220℃ for 45min-1h after application;
2. During the application of topcoat, the surface temperature cannot be lower than 160 ℃;
3. Top coat shall be cured under 200℃~230℃ for 1-1.5h. (including heating time)

Storage Condition

Shall be stored in dry, shady and cool, draughty condition away from heat and fire source, must in accordance with the national regulations. The packaging container shall be kept alright. Unused coatings should be properly packaged and stored to avoid moisture.
Shelf life: One year when stored under the storage conditions required by the manufacturer and with packaging intact.

Packing

25kg carton package.

Health and Safety

Please observe the precautionary notices displayed on the container. Use under well-ventilated conditions.

Date of Issue

2023, July 2nd