

## Technical Data Sheet

### BUTF® -202

#### Product Description

BTUF®-202 is a one-component, heat curable, thermosetting powdered novolac epoxy coating that can be applied to internal coating for line pipes, which has excellent corrosion protection and mechanical properties.

#### Recommended Use

When be applied with TAFF®-523 as primer, it meets all the requirements of pipeline internal coating for desalinate water, brine, post treatment water, oilfield sewage and crude oil transportation(With primer, this coating meets Saudi ARAMCO seawater and sour gas service requirement. The maximum wet operation temperature is 90 °C.

#### Material Properties

Properties	Typical	Test Method
Gel time (190°C)	80-160 s	ISO 8130-6
Curing time (202±3°C)	60 min	ASTM D4217
Density (g/cm <sup>3</sup> )	1.50±0.05	ASTM D 795
Particle size 150µm on screen	≤3%	ASTM D 1921
Particle size 250µm on screen	≤0.2%	ASTM D 1921
Coverage	25m <sup>2</sup> /kg(25µm)	
Moisture content	≤0.5%	ASTM D4017
Color	Blue	Visual
Thermal characteristics Heat release	30 – 50J/g	CAN/CSA 245.20
Thermal characteristics Tg <sub>2</sub>	> 100°C	CAN/CSA 245.20

#### Coating Properties

Properties	Typical	Test Method
Flexibility (-30°C, 3°)	No cracks	NACERP0394 Appendix H
Abrasion Resistance (CS17,1000g, 1000rpm)	Weight loss ≤40mg	ASTM D4060
Impact (300-400µm, -30°C)	> 5J	ASTM G14
Adhesion strength at 73°F (23°C)	≥4500psi/cm <sup>2</sup>	ASTM D 4541-09

Hot water soak (95°C,90d)	Rating 1	NACERP0394 Appendix J
Oil water mixture soak (80°C,30d)	Rating 1	
Artificial sea water soak (95°C,60d)	Rating 1	
Autoclave (Temperature:100°C/212°F, Pressure: 4400 psi/30 MPa , 3%NaCl, Duration: 168 hours )	Pass	NACE TM 0185-2006
Interface porosity	Rating 1	NACERP0394 Appendix G
Cross-section porosity	Rating 1	NACERP0394 Appendix G

## Applicable Scope

Content	Requirements
Surface preparation	In accordance with SSPC SP 10, grade Sa2 1/2
Surface profile	35-85µm
Recommended coating thickness	375-625µm

## Surface Preparation

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 35-85um.

## Application Condition

1. Recommended application environment temperature shall be between 5°C~40°C, 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. BUTF®-202 shall be applied with vacuum adsorption or venturi pump method.

## Application Parameter

1. Primer shall be cured under 180°C~220°C for 45min-1h after application;
2. The surface temperature of items shall not be lower than 160°C during the Topcoat powder application ;
3. Top coat shall be cured under 200°C~250°C for 1-1.5h.

## Storage Condition

The product must be stored in accordance with state regulations. Storage environment shall be well ventilated, cool, dry, away from fire and heat. Packaging containers must be closed and avoid being undone.

The unused part shall be well packed and stored to avoid getting damped.

Shelf life: one year in the storage conditions required by the manufacturer and with intact packaging.

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## Handling

Hand with care. Operate as instructed on packing before use.

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## Packing

25kg carton package.

Packing can be different in different countries according to local requirement.

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## Health and Safety

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

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## Date of Issue

July 2<sup>nd</sup>, 2020