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Protective Coating Criteria Chart

Surface Prep: All Internal linings require the best surface prep possible. Brother's does not recommend anything less than a White Metal Blast (NACE 1 / SSPC SP5) for all of the lining systems that it applies.

Internal Lining Systems:

- Devchem 253, Tnemec 61 series -** Sour **Service Temperatures up to 93°C.**
Can be used in tanks, vessels and piping applications.
- Highland 74HF series -** Produced water, Sour **Service Temperature up to 135°C** Good for Methanol Service as well. Can be used in tanks, vessels and piping applications.
- Devoe Bar Rust 233H, Tnemec 141 Series -** Fresh & Potable Water, NSF Specification, AWWA C210. **Service Temperature up to 80°C.** Can be used in tanks, vessels and piping applications.
- Tnemec 22, 100% solids Epoxy -** An advanced generation, 100% solids, high-build epoxy for the protection of steel and concrete. It provides excellent resistance to abrasion, is suitable for immersion and chemical contact. Certified by **NSF International** in accordance with **NSF/ANSI Std. 61** and is qualified for use on tanks and reservoirs of five (5) gallons capacity or greater, pipes 1/2" in diameter or greater and valves 1/2" in diameter or greater. Series 22 conforms to **AWWA C210. Temperature resistant to 121°C Constant and 135°C Intermittent.**

Abrasion Resistant Linings:

- Tnemec 142 Epoxy -** Abrasion resistant, high solids, epoxy coating which offers high-build edge protection and excellent corrosion resistance. Contains micro-fiber reinforcement for improved film integrity. For use on the interior and exterior of steel or concrete tanks, pipes, and other heavy-duty equipment in industrial service. **Service Temperature up to 80°C**
- Highland 74AR series -** Produced water, Sour **Service Temperature up to 135°C** Good for Methanol Service as well. Formulated with Abrasion Resistant technology for abrasive and corrosive applications. Can be used in tanks, vessels and piping applications.

Devchem 268 Epoxy -

Chemical / Abrasion Resistant Lining. Sour **Service Temperatures up to 93°C**. Can be used in tanks, vessels and piping applications.

High Pressure Lining:

Devchem 256 Epoxy -

Can be used as an alternate to Devoe 253; **Higher Temperature Service to 140°C**; Designed for CO₂ applications. Can be used in tanks, vessels and piping applications.

External Coatings: Near White Metal (NACE 2 / SSPC SP10) Surface Prep as a minimum.

Below Grade - CSA Z245.30-22

Icat ECL 375 100% solids -

For buried service requirements. **Temperature Limits of 100°C**. Meets TransCanada Pipeline testing requirements. Exceeds yellow jacket / tape wrapping requirements. Meets CSA Z245.20-06.

Icat FC210 100% solids -

For buried service requirements. **Higher temperature applications up to 100°C**. Meets TransCanada Pipeline testing requirements. Exceeds yellow jacket / tape wrapping requirements. Meets CSA Z245.20-06.

Denso Protal 7200 100% solids -

For buried service requirements. **Temperature Limits of 95°C**. Approved coating for most Buried Service Pipeline Specifications.

Denso Protal 7900HT 100% solids -

For buried service requirements. **Intermittent Service Temperature Limits of 150°C**. Approved coating for most Buried Service Pipeline Specifications.

Under Insulation: Near White Metal (NACE 2 / SSPC SP10) Surface Prep as a minimum.

Devoe Bar Rust 236 epoxy -

Bar-Rust 236 is a true universal coating. Excellent for use on water tanks and any other water containment structures offering cargo, chemical, fuel, and solvent resistance. Also used on structural steel, equipment, piping and masonry at pulp and paper mills, chemical and fertilizer plants, sewage treatment plants, tank farms and on bridges. **Service Temperature up to 93°C**

Intertherm 228HS Epoxy -

Intertherm 228HS has been specifically designed to provide a corrosion resistant barrier when used to protect steelwork beneath thermal insulation in areas subjected to wet and dry cycling. Suitable for exposure in a wide range of highly corrosive environments, including insulated and uninsulated steel, and on the exterior or pipework, process vessels etc., **operating at temperatures up to 446°F (230°C)**. Intertherm 228 has excellent resistance to "thermal shock" experienced during rapid temperature cycling.

Tnemec N69 Epoxy -

An advanced generation epoxy for protection and finishing of steel and concrete. It has excellent resistance to abrasion and is suitable for immersion as well as chemical contact exposure. This product can also be used for lining storage tanks that contain demineralized, deionized or distilled water. **Service Temperatures up to 121°C**

Carboline Thermaline 450 -

Highly cross-linked, glass flake-filled polymer that offers exceptional barrier protection and resistance to wet/dry cycling at elevated temperatures. Suitable for insulated and non-insulated pipes, stacks and equipment **operating up to 450°F (232°C)**. This coating provides excellent resistance to corrosion, abrasion and permeation, and its novolac-modification resists severe chemical attack.

Above Grade Applications: Commercial Grade (NACE 3 / SSPC SP6) Surface Prep as a minimum. Typically, Near White Metal Grade (SSPC SP10) as a minimum under Zincs.

These are some of the various options to apply to above grade Splash Zone & UV exposures.

Tneme-Zinc 90G-K197 Zinc Rich Epoxy / Tnemec N69 External Epoxy / Tnemec 73 Series Polyurethane

Devoe Catha Coat 302H Zinc Rich Epoxy / Devoe 235 epoxy / Devoe 389H Polyurethane

Carbozinc 11 Inorganic Zinc or Carboline 859 Organic Zinc / Carboguard 890 Epoxy / Carbothane 134HG Polyurethane

Interzinc 22 Inorganic Zinc or Interzinc 52 Organic Zinc / Interseal 670HS / Intergard 345 Epoxy / Interthane 990 Polyurethane

Sherwin Williams Zinc Clad IV / SW Macropoxy 646 Epoxy / HS Solids Polyurethane or Acrolon 218HS Polyurethane

Shop (Alkyd) Primer / Alkyd Enamel: Commercial Grade (NACE 3 / SSPC SP6) surface prep as a minimum.

Cloverdale 710 Alkyd Primer / Cloverdale Enamels

Brother's can help with a variety of liquid coating applications. This is a sample of the coating systems we frequently have requests for. As each application is unique to its own specification, it is best to contact a Brother's representative for further information and project specifications to ensure you are using the right application.