

SELECTION & SPECIFICATION DATA

Generic Type	Amine Adduct Cured Modified Epoxy Phenolic
Description	A high performance immersion-grade coating system which has excellent resistance to wet/dry cycling conditions at elevated temperatures. It is typically used on hot steel substrates under insulation operating up to 204°C (400°F). It has excellent chemical resistance properties to handle the corrosive effects of wet insulation under thermal cycling conditions. Thermaline 400 is typically used as a two coat primer & finish system.
Features	• Temperature resistance to 204°C (400°F) • Very good flexibility • Excellent overall chemical resistance • Very good abrasion resistance • Easily applied by spray • Acceptable for use over stainless steels
Colour	Primer: Red Finish: Grey
Finish	Flat
Film Build	Primer: 125 microns DFT Finish: 125 microns DFT
Solid(s) Content	Primer: 65% ±2% Finish: 63% ±2%
Coverage Rate	Primer: 5.2 m² / litre at 125 microns DFT Finish: 5.0 m² / litre at 125 microns DFT Mixing and application losses will vary and must be taken into consideration when estimating job requirements.
VOC Values	As Supplied : Primer: 300g/l - Finish 312 g/l
Under Insulation Resistance	Continuous: 204°C (400°F) Non-Continuous: 232°C (450°F)
Limitations	Where Thermaline 400 is used on externally exposed surfaces (such as pipeline valves) it should be sealed with a suitable heat and UV resistant coating. Fully exposed Thermaline will erode away very rapidly under the combined effects of UV and elevated temperatures.

SUBSTRATES & SURFACE PREPARATION

General	All surfaces must be thoroughly cleaned to remove dirt, grease, mill scale, loose rust and any other contaminants that can reduce adhesion via AS 1627.1 (SSPC-SP1) solvent cleaning with recommended surface preparation.
Steel	Weld slag must be removed and welds ground to a rounded contour. Degrease in accordance with SSPC SP1. Abrasive blast to SSPC-SP 10 (AS 1627.4 Sa 2½) and achieve a uniform jagged blast profile of between 35µm (minimum) and up to 75µm. Stripe coating of properly prepared welds with Thermaline 400 Primer by brush or spray is recommended.

Thermaline 400

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

Stainless Steel	Surface profile should be a dense angular 25-75 microns and is best achieved by abrasive blasting with non-metallic media. Remove all contaminants that would interfere with the performance of stainless steel for the intended service such as, but not limited to, embedded iron or chlorides.
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MIXING & THINNING

Mixing	Primer & Finish: Power mix separately, then combine and mix in the following proportions: 5 litre Kit: 4 litres of Part A with 1 litre of Part B
Thinning	May be thinned up to 25% with Thinner #2. Use of thinners other than those supplied or approved by Carboline may adversely affect product performance and will void product warranty whether express or implied.
Ratio	4:1 by volume
Pot Life	4 hours @ 24°C and less at higher temperature. Pot life ends when coating loses body and begins to sag.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

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Conventional Spray	Pressure pot equipped with dual regulators, 9.5 mm (3/8") ID minimum material hose, 1.4-1.80 mm (.055-0.070") fluid tip with appropriate air cap.
Airless Spray	Pump Ratio: 30:1 (min)* Output: 10 litre/minute (min) Material Hose: 9.5 mm (min) Tip Size: 0.015-0.019" Output PSI: 2100-2300 Filter Size: 60 mesh *PTFE packings are recommended and available from the pump manufacturer.
Brush & Roller (General)	For striping of welds and touch-up of small areas only. Use a natural bristle brush applying in full strokes. Avoid rebrushing. If rolled, use a short nap roller with solvent resistant core. Avoid rerolling.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	13°C (55°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	32°C (90°F)	43°C (110°F)	38°C (100°F)	85%

Do not apply when the surface temperature is less than 3°C above the dew point. Special thinning and application techniques may be required above or below normal conditions.

CURING SCHEDULE

Surface Temp.	Final Cure Time	Between Coats
10°C (50°F)	NR	4 Days
16°C (60°F)	15 Days	2 Days
24°C (75°F)	7 Days	24 Hours
32°C (90°F)	2 Days	12 Hours

These times are based on the recommended dry film thicknesses. Excessive film thickness or inadequate ventilating conditions after application require longer dry times and will cause premature failure in extreme cases. Excessive humidity or condensation on the surface during curing may result in surface haze or blush; any haze or blush should be removed by washing with water before recoating.

CLEANUP & SAFETY

Cleanup | Use Thinner #2.

Ventilation | When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapour concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use suitable approved supplied air respirator.

Caution | This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the local electrical code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life | 24 months when stored at 24°C

Storage Temperature & Humidity | 4°-43°C
0-90% Relative Humidity

Flash Point (Setaflash) | Part A: 8°C
Part B: 29°C

Shipping Weight (Approximate) | 5 litre Kit - 8 kg

Storage | Store indoors

WARRANTY

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