



## Technical data

### TERMARUST SERIES TR2100 HRCSA SELF PRIMING TOPCOAT

#### Product description

Termarust® TR2100 HRCSA High Ratio Co-Polymerized Calcium Sulfonate Primer/Topcoat is a pigmented type of co-polymerized reacted synthetic resin with a unique patented crystalline modification that cures by air oxidation. High Ratio Co-Polymerized Calcium Sulfonate HRCSA coatings are formed by reacting a specific acid, using a proprietary process and a base made of a specific synthetic (grown artificially as opposed to natural crystalline) base material with polymers, to form an active chemistry for the control of corrosion, crevice corrosion and pack rust. This system is ideal for use over minimally prepared surfaces, and is especially suited for coating of flexible structures. High Ratio Co-Polymerized Calcium Sulfonate coatings, designed and engineered exclusively for encapsulation (overcoat) of existing aged leaded paints, vinyl, coal tar epoxy, polyurethanes, epoxy mastics, organic or inorganic zinc, galvanizing, metallizing, acrylics, COR-TEN steel and tightly adhered contaminant free rust, or re-coating of new or prepared structural steel. Ideal for use with High Pressure Water Cleaning, i.e. 34.5 Mpa (5000 psi) - 48.3 Mpa (7000 psi) at 18.9 liters (5 US gallons) to 22.7 liters (6 US gallons) per minute with a zero degree rotating tip (at a maximum of a 10 cm (4 inch) standoff distance) to a (SSPC WJ4- NVC3, & NVS10, NVN10) standard removal of loose paint and loose rust with preferably hot water.

#### Uses

Termarust® TR2100 HRCSA High Ratio Co-Polymerized Calcium Sulfonate Primer/Topcoat allows tremendous flexibility in surface profile and preparation. It is ideal for the reclamation and long term protection of bridges, steel structures, highway overpasses, utility towers, cable suspension systems, pipelines, storage tanks and industrial infrastructure

#### Advantages

Termarust® TR2100 HRCSA High Ratio Co-Polymerized Calcium Sulfonate Primer/Topcoat enhances the following characteristics:

- Advanced Technology
- Applicator Friendly
- Surface Tolerant
- Non-Hazardous
- Low VOC
- Non-conductive tested to 100 KVA
- Field proven performance over 28 years
- High Performance
- Single Component
- Single Coat
- No Hazardous Waste Stream
- Superior Anti-Corrosive Protection

Termarust® TR2100 HRCSA High Ratio Co-Polymerized Calcium Sulfonate Primer/Topcoat in testing outperforms zinc/epoxy/urethane systems for corrosion resistance and UV stability.

#### Chemistry

High Ratio Co-Polymerized Calcium Sulfonate HRCSA (Minimum 9.5% active sulfonate, must maintain a 9-11 to 1 ± 2% ratio Total Base Number to Active Sulfonate i.e. total base number of 85 to 104 to 9.5% Active Sulfonate as determined by Titration Testing (See Termarust technical dept. for protocols)

## System solvent

Termarust® Thinner TRT01

## Color

All colors available on request

## Gloss at 60°

15-25° ASTM D523 (ISO 2813)

## Mix ratio

NA

## Viscosity

7000-15000 CPS ASTM D2196 RVT #6 AT 10 RPM Dynamic:(23°C, Brookfield)

## Solids by volume

63.5% ± 4% (depending on color) ASTM D2697 (ISO 3233)

## Specific Gravity ASTM D854

1.050 – 1.190 (depending on color)

## Volatile Organic Compounds (VOC) ASTM D6803

240-290 grams per litre (depending on color)

2.0 - 2.42 lbs per US gal (depending on color)

## Sag Resistance ASTM D4400

24 minimum

## Dry Film Thickness (DFT) (ISO 19840 or ISO 2808) (SSPC-PA2 Digital Gauge with Shim)

250 - 300 microns - 10 - 12 mils DFT recoat (prepared steel)

125 - 175 microns - 5 - 7 mils DFT overcoat (existing coatings)

## Spread rate

26.2 sq. m. per litre @ 25 microns DFT 1018 sq. ft. per U.S. Gal. @ 1 mil DFT

## Dry time ASTM D1640

12 to 24 hours depending on film thickness and ambient temperature

Note: Does not get brittle like conventional paints

## Performance data

*Cyclic Corrosion:* 24hr Freeze-Thaw 360 hr cycle FHWA 2009 (ASTM D5894) (ISO 11997-1+2)

Test results: @ 4-6 mils DFT, 19 cycles 6840 Hrs. no failure at the scribe.

*Salt Spray Resistance:* (ASTM B117): @4 mils DFT 4,000 - 5,000 hours (ISO 9227),

*Salt Spray Resistance:* with < 2mm creep at the scribe (ASTM D1654) (ISO 17025 scope)

@10 mils DFT 8000-10,000 hours

*QUV Weatherometer:* (ASTM D4587-11) (ISO 11507)

@ 4 mils DFT 4,000 - 5,000 hours. Passes with no peeling, flaking or corrosion

*CI51B Xenon Arc:* @ 4 mils DFT Passes with no peeling, flaking, or corrosion

*K.T.A. Tator Enviro-Test* ASTM Standard Practice draft #1 Date 04-10-92:

10 mils DFT SP6-Steel 4,445 hours; 10 mils DFT Aged Alkyd 1,200 hours; 5 mils DFT SP6 - Steel 2,248 hours; 5 mils DFT Aged Alkyd 1,520 hours.

\*All films are pigmented; Data may vary depending on formula.

## Chemical resistance

No Hydrocarbon immersion, Not recommended for PH lower than 4.5,

## Surface preparation

All grease, oil, grime, and other contaminants must be removed from the surface using, (SSPC-SP1). Hand tool cleaning (SSPC-SP2), power tool cleaning (SSPC-SP3), or High Pressure Water Cleaning (SSPC-WJ4), is sufficient preparation to produce excellent results, SSPC-SP6 or SSPC-WJ3 (L to M) is recommended for immersion service. The prepared surface must be analyzed for minimum level of Chloride NVC3 3 ug/cm<sup>2</sup>, Sulfate NVS10 10ug/cm<sup>2</sup>, Nitrate NVN10 10ug/cm<sup>2</sup>.

## Application

The Termarust® TR2100 HRCSA Primer/Topcoat should not be applied at temperatures below 2°C or 35.6°F. No Coatings should be applied unless the steel surface temperature is 3°C or 5°F above the dew point. Temperature must be maintained during application. To apply the coating the relative humidity should be no greater than 99% and the steel should be free of surface moisture.

*Note:* As a touch-up procedure Termarust TR2100 HRCSA Primer/ Topcoat may be applied below freezing (-18°C or 0°F). This is not recommended unless steps are taken to control ice crystals on the steel before application. i.e. spot heating. Cold temperatures will slow the coating's cure.

## Application equipment

Airless 15 to 26 tip, Conventional Spray, HVLP, LVLP, Brush, Roller, or Paint Mitt.

## Compatible systems

Termarust TR2200HS HRCSA Penetrant/Sealer,

## Thinning (maximum 10%) TRT01

Brush/Roller: Up to 10% with TRT01

Conventional Spray: 10% with TRT01

Airless Spray: No thinning required

## Clean up

Use TRT01 Thinner

## Test: LC50 96 HOUR TROUT

41,017 ppm (does not adversely affect marine life)

## Weight per gallon

1.095 kg/litre ± 1.00%, 9.13 lbs/US Gal. ± 1.00% STM D1475

## Elongation

700% ASTM D522 (Test Methods for Mandrel Bend Test of Attached Organic Coatings),

## Shelf life

12 months minimum in original unopened container when stored in a protected area where the temperature is between 5°C and 30°C (41°F - 86°F). Note: After 12 months verify the coating to see if a skin has formed. If a skin is present remove skin and mix the material. Before an open container is closed a thin layer of TRT01 should be poured on top. This will retard any skinning.

## Safety precautions & regulatory data

Treat as flammable liquid - Flashpoint 42°C (108°F). Keep away from heat, open flame, and sparks. Avoid contact with skin and eyes. Avoid prolonged breathing of vapor. Read label instructions carefully and refer to Material Safety Data Sheet supplied. This product is for industrial use only and is not intended for use in or around a household or dwelling. \*All films pigmented; data is formulation dependent.

Notes: NA

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THE BEST CORROSION CONTROL PERFORMANCE GUARANTEED

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Termarust manufactures the only HRCSA coatings with a 28-year field history of solving structure critical corrosion on structural steel.