ADVANCED PROTECTIVE COATING SYSTEM

RailShield VSC™ 1300 DTM TOPCOAT

with
Eastman **TETRASHIELD**™
protective resin systems

VSC™ 1300 DTM TOPCOAT

VSC 1300 DTM is a high build, high performance 2K urethane topcoat designed to be applied direct to metal in a single coat for the exterior of rail cars. VSC 1300 DTM is hard, tough, and extremely durable. The key is in the resin and Eastman Tetrashield™ protective resin systems create coatings that protect. Eastman has a long history of developing innovative polymers to solve the toughest problems and this latest innovation of Tetrashield continues this legacy. Valentus Specialty Chemicals and Eastman have invested thousands of research hours over the past four years to bring this remarkable technology to market as a DTM coating.

PHYSICAL PROPERTIES (Mixed)

STANDARD COLORS	Black, Gray, White & ANSI Safety Colors
CUSTOM COLORS	Available upon request
FINISH	High Gloss
TACK FREE TIME	3-4 hrs depending on ambient conditions
%SOLIDS BY WEIGHT	76
%SOLIDS BY VOLUME	64
COVERAGE (Theoretical)	170 sq. ft./gal @ 6 mils DFT, assumes no Loss
RECOMMENDED THICKNESS	5-7 mils dry (8-10 mils wet)
VISCOSITY	75 Ku
WORKABLE POT LIFE	4 hours at 77° F
SAG RESISTANCE	10+ mils
RECOAT TIME	1-5 hours
COATING VOC	2.8# per gl. (340 gms./l.)
FLASHPOINT	80°F
FLAMMABILITY CLASS	Flammable IC

Advantages:

- Direct to metal adhesion
- High gloss & high build
- Outstanding long term gloss & color retention
- Excellent resistance to acids, bases, organic solvents & hydraulic fluids
- Consistent & easy application
- Cure window that gets rail cars back in service quicker

PRODUCT DESCRIPTION:
Premium performance high solids, low VOC two component (4:1) DTM urethane topcoat, with outstanding weathering, toughness and chemical resistance.

RECOMMENDED USES:
Designed for use over properly prepared steel across the rail industry, in both new build and maintenance applications.

Excellent performance in medium to heavy duty maintenance applications for most industrial & commercial environments.

PERFORMANCE DATA

Corrosion ASTM B117 Salt Fog Blasted steel

Film Build	ASTM B117 rating
5-7 DFT	Greater than 750 hrs. no face blister, no face rust, less than 1mm scribe rust

Chemical resistance VSC 1300 at target film build, 7 day ambient cure, 7 day direct contact exposure

Material	Rating
Acid (sulfuric)	Excellent – no damage
Base (sodium hydroxide)	Excellent – no damage
Solvents	Good
Brake Fluid	Good (some softening)
Hydraulic Fluid	Excellent
Water*	Excellent
Salt water*	Excellent
*Not recommended for immersion	

Weathering: VSC 1300 at target film build, 7 day ambient cure 60 degree gloss retention

Method	Rating
Xenon ASTM 7869	4000 hrs. > 70% gloss retention
ASTM G154 cycle 1 (QUVA)	6000 hrs. > 70% gloss retention

Adhesion VSC 1300 at target film build, 7 day ambient cure

Method	Rating
Condensing Humidity ASTM D2247 at 600C 7days blasted steel	Excellent
Field exposed Blasted steel	Excellent

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DIRECTIONS FOR USE

Railshield VSC 1300 DTM topcoat is designed as a Direct to Metal product, normally requiring no primer. If a primer is desired, EpoxyGrip 2900 is recommended.

SURFACE PREPARATION:

Surfaces must be clean, dry, free from oil, grease, hydraulic fluids, silicone contamination, waxes or any other residue. Use a solvent or commercial cleaner that does not leave a residue per SSPC-SP 1.

For steel applications, whether new metal or re-paint, abrasive blasting is highly recommended. Blast to a commercial finish per SSPC-SP6/NACE 3 to obtain a 1.5-3 mil profile.

If abrasive blasting is not possible, then use a 5 stage Iron Phosphate cleaning/surface treatment system.

APPLICATION: PLURAL COMPONENT OR MANUAL MIXING

MIXING: 4 parts VSC 1300 Topcoat Part A

1 part VSC 1300 Topcoat Part B

- Material is supplied in two containers as a unit, always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.
- Mix Part A thoroughly with low speed power agitation
- Then combine components, blend 1 Part B into 4 Parts A and thoroughly agitate the mixture with low speed power agitation.
- There is no induction period required, material is ready to use
- Do not apply material beyond the recommended pot life
- Do not mix previously catalyzed material with fresh material
- DO NOT MIX PARTIAL KITS - ONLY USE ONE & FIVE GALLON KITS AS SUPPLIED

METHOD OF APPLICATION: Air, Airless or Air Assisted Airless Spray, Brush or Roller

Brush or Roller: No thinner is necessary throughout the workable pot life window. Use a natural bristle brush or medium nap roller with a solvent resistant fibers & core. Work coating into all gaps and crevices. Apply wet and avoid excessive brushing or re-rollering.

Airless or Air Assisted Airless: No thinner is necessary throughout the workable pot life window. An airless pump equivalent to Graco Bulldog 30:1 ratio at 1900-2100 psi is recommended, with a 60 mesh in line filter. Use .013" to .0315" spray tip. Good results have also been achieved with a Graco 60:1 Bulldog pump at 45 psi, using a 517-519 tip. A Graco air assisted 30:1 pump or equivalent 1900 - 2300 psi, and 65 psi atomizing pressure is recommended, using a 311 reversible tip. **Optimum results have been achieved using a .017" tip at 2600 psi with a 3/8" ID hose and no thinning.**

Conventional Air: A small amount of thinning may be required for good atomization. If necessary, use only VSC 8100 Thinner at 2-3% by volume maximum. Industrial sprayers such as DeVilbiss MBC or JGA and Binks 18 or 62, fitted with a double regulated pressure pot, 3/8" ID minimum material hose and a .070" - .086" ID fluid tip and matching air cap, are recommended.

CLEANUP & PROLONGED WORK STOPPAGES: Do not allow material to remain in hoses at the end of a job, or during prolonged work stoppages. Thoroughly flush & clean all equipment immediately after use with Acetone or MEK. Any mixed topcoat should not be re-used after its workable pot life.

All excess material and empty containers should be disposed of in accordance with appropriate local, state and federal regulations.

SHELF LIFE: 2 years from date of manufacture unopened at 77°F

CAUTION: For industrial use only. Read and follow all caution statements on this product data sheet, and on the Material Safety Data sheet for VSC 1200 2K Urethane Topcoat

HEALTH & SAFETY: This is a Flammable IC material. Use explosion proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used.

In confined spaces (or when spraying) use a chemical respirator with organic vapor cartridge and full facepiece.

WARRANTY: Any recommendation by Valentus Specialty Chemicals contained herein, covering the use, utilization, chemical or physical properties and other qualities of our products sold is believed to be reliable, and meet the performance standards as published in our brochures and technical data sheets, when applied and tested under our prescribed conditions; however, Valentus Specialty Chemicals makes no warranty or representation with respect thereto. Use or application is at the discretion of the Buyer without liability or obligation whatsoever of Valentus Specialty Chemicals.

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