TECHNICAL DATA SHEET

# VULKEM® 350FC/EWS Hybrid

Elastomeric, Waterproof Vehicular Traffic Deck Coating System

## PRODUCT DESCRIPTION

Vulkem® 350FC/EWS Hybrid Vehicular Traffic Deck Coating System is designed to have a tenacious bond to concrete and extreme abrasion resistance. It can be driven on in one hour after final application, which will minimize operational disruption. Vulkem Extreme Wearing System (EWS) is a waterproof traffic deck coating system that utilizes polyurethane-methacrylate (PUMA) technology. Vulkem 350FC/EWS Hybrid is composed of a double layered 2 component fast cure urethane base coat (Vulkem 350FC), an intermediate wear coat (Tremco PUMA WC with Tremco PUMA BC LM additive) and a topcoat (Tremco PUMA TC). All Tremco PUMA components are cured using Tremco PUMA Initiator+.

Vulkem 350FC Base Coat is a two-component, fast-curing, VOC-compliant, chemically curing crack bridging urethane membrane that bonds firmly to clean, dry, and prepped concrete and metal suvrfaces. It retains its integrity even if substrate movement causes hair- line cracks of up to 1/16” (1.6 mm). Vulkem 350FC will prevent water migration between itself and the substrate and is compatible with Tremco’s EWS with PUMA Technology. Vulkem 350FC is installed as a 2-coat system. The second coat will be loaded with aggregate to increase bond to the wear coat and provide further wear resistance and increased shear stability.

Tremco PUMA Primer is a polymethyl-methacrylate (PMMA) two-component adhesion promoter to existing MMA or polyurethane tie-ins. Tremco PUMA WC is a polyurethane-methacrylate (PUMA) wear coat.

Tremco PUMA WC is mixed with the Tremco PUMA BC LM additive. The Wear coat is loaded with aggregate to give the system excellent impact, abrasion, and chemical resistance.

Tremco PUMA TC is a polymethyl-methacrylate (PMMA) topcoat. Interlaminate adhesion to Tremco PUMA WC is exceedingly strong. The topcoat affords excellent abrasion resistance, UV stability and chemical resistance to complete the Vulkem 350FC/EWS Hybrid Vehicular System.

Tremco PUMA Initiator+ is a reactive catalyst in the form of a white powder used to cure all PUMA/PMMA resins.

## BASIC USES

Vulkem 350FC/EWS Hybrid Vehicular System is a fast curing cold-applied traffic deck coating system designed for waterproofing concrete slabs and protecting occupied areas underneath from water damage. Additionally, the system will protect concrete from the damaging effects of chloride, deicing salts, chemicals, gasoline, oils, and anti-freeze. The Vulkem 350FC/EWS Hybrid Vehicular System is ideal for parking structures, high wear turn and drive lanes, helical turns, ramps, and ticket spitters.

## FEATURES & BENEFITS

- PUMA technology delivers extreme durability while maintaining its crack-bridging characteristics, eliminating the need for reinforcing fabric.
- Rapid-set up times allow for quick overall installation, as well as the ability to open up to traffic one hour after the finished application.
- Extremely forgiving application allows users to apply additional coats long after the previous coat has cured.
- Unique chemistry allows for easy repair.
- Compatible with Tremco sealants, coatings, and expansion joints, which is essential for tie-ins, detailing and penetrations.

## AVAILABILITY

Immediately available from your local Tremco Sales Representative, Tremco distributor, or warehouse.

## PACKAGING

Vulkem 350FC: Total of 4.6 gal kit – Part A: 3.85 gal (14.6 L) in a 5-gal pail, Part P: 0.71 gal (2.7 L) in a 1-gal pail.

Tremco PUMA Primer: 2-gal and 6-gal pails.

Tremco PUMA WC: 6-gal pails.

Tremco PUMA BC LM: 6-gal pails.

Tremco PUMA TC: 6-gal pails.

Tremco PUMA Initiator+: 10-lb in 3-gal pails, 25-lb in 6-gal pails, 25 75-g pouches in a box.

Tremco PUMA Cleaner: 6-gal pails.

## COLORS

Tremco PUMA TC is available in Gray, Slate Gray, Charcoal, White, *Beige, Tintable and **Decorative. Universal Color Paks are available for use with Tremco PUMA TC Tintable.

*Denotes special order color. **For use with decorative aggregate.

## APPLICABLE STANDARDS

ANSI/UL790 – Standard Test Methods for Fire Tests of Roof Coverings

CAN/ULC/S107 – Methods of Fire Tests of Roof Coverings

CSA-S413

## FIRE RATED ASSEMBLIES

Concrete shall be water-cured and attain a 4000 psi minimum compressive strength. Moisture content in the concrete must be lower than 4.5% as measured by a Tramex CME 4 Moisture Meter. Depending on concrete construction and job site location, additional concrete testing may be required. Please contact your local Tremco Sales or Technical Representative.

Please refer to the Vulkem 350FC/EWS Hybrid Application Instructions for complete application details. The techniques involved may require modification to adjust to job-site specific conditions. Consult your Tremco Sales Representative or Tremco Technical Service for site conditions and requirements.

## LIMITATIONS

- Use with adequate ventilation.
- Not for use over expanded polystyrene, extruded polystyrene, poured in place gypsum, lightweight insulating concrete, cementitious wood fiber decks and coal tar pitch.
- Do not apply in falling precipitation or when precipitation is imminent.
- All surfaces must be sound, clean, free of standing water, and free from contamination.
- Any questions regarding drying times, coverage rates and unique application techniques should be directed to Tremco Technical Services or your local Tremco Sales Representative.
- Do not apply over contaminated surfaces.
- Do not thin.
- Substrate must be at least 5 °F (3 °C) above the measured dew point temperatures to avoid dew point conditions.
- Do not store in direct sunlight for prolonged periods.
- Unvented metal pan decks, slab-on-grade and hollow core plank decks require additional qualification prior to application. Please contact Tremco Technical Services for more information.

## WARRANTY

A repair or replacement warranty is available on all Tremco products. Visit https://www.tremcosealants.com/warranties/ for details.

| Typical Physical Properties | | | | | |
|---|---|---|---|---|---|
| Property | Test Method | Vulkem 350FC | Vulkem 350FC | Tremco PUMA WC+BC LM | Tremco PUMA TC |
| % Solids (by weight) | ASTM D1359 | 85% | 85% | 100% | 100% |
| Drying Time @ 75 °F, 50% RH | ASTM D1640 | 20 mil film, 3-4 hrs | 15 mil film, 7 hrs | 25 mil film, 1 hr | 25-29 mil film, 1 hr |
| Weathering | ASTM D822 Weatherometer 350 hr | N/A | N/A | N/A | No Effect |
| Elongation | ASTM D638 | >500% | >500% | 250% | 130% |
| Elongation | ASTM D5147 | | | Min 30% | Min 30% |
| Tensile Strength | ASTM D638 @ 75 °F | >3500 psi | >3500 psi | 1550 psi | 986 psi |
| Tearing Resistance | ASTM D4073 | | | 148 lbf | 203 lbf |
| Hardness (Shore D) | ASTM D2240 | | | 45 | 55 |
| Hardness (Shore A) | ASTM D2240 | >90 | >90 | 96 | 100 |
| Abrasion Resistance (1000 cycles) | ASTM D4060 | N/A | N/A | N/A | 51 mg |
| Peak Load @ 73 °F, avg | ASTM D5147 | | | 81 lbf/in | 238 lbf/in |
| Puncture Resistance | ASTM D5602 | | | >56 lbs | >56 lbs |
| Water Absorption | ASTM D570 | | | <0.1% | <0.1% |
| Water Vapor Transmission | ASTM E96 | | | 0.03 perms | 0.03 perms |
| Adhesion-In-Peel | ASTM C794 | >20 pli | >20 pli | 35 lbs | N/A |
| Self-Ignition Temperature | ASTM D1929 | | | 850 °F (454 °C) | 850 °F (454 °C) |
| Smoke Density | ASTM D2843 | | | 28.7% | 2.1% |
| Rate of Burn | ASTM D635 | | | 1.7 in/min | 0.2 in/min |
| Impact Resistance | *ASTM D3029/UCL | 400 in/lbs. | 400 in/lbs. | Exceeds | Exceeds |

*Impact is run to the full system over 3100 /psi (21/Mpa) 2" thick concrete. Concrete must crack leaving the coating system intact.

Please refer to our website at for the most up-to-date Product Data Sheets.

NOTE: All Tremco Safety Data Sheets (SDS) are in alignment with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) requirements.

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