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## Product Description

Vulkem® EWS with PUMA Technology is designed to have tenacious adhesion and extreme abrasion resistance. It can be walked on in one hour, which will minimize operation disruption. Vulkem Extreme Wearing System (EWS) is a waterproof traffic deck coating system that utilizes polyurethane-methacrylate (PUMA) technology. Vulkem EWS is composed of a primer (Tremco PUMA Primer), a base coat (Tremco PUMA BC), and a top coat (Tremco PUMA TC). All system components are cured using Tremco PUMA Initiator.

Tremco PUMA Primer is a methyl-methacrylate (MMA), two-component primer for porous and non-porous substrates. Tremco PUMA BC is a modified polyurethane-methacrylate (PUMA) base coat. Tremco PUMA BC bonds firmly to Tremco PUMA Primer. It retains its integrity even if substrate movement causes hair-line cracks of up to 1/16" (1.5 mm). If cut or damaged, Tremco PUMA BC will prevent water migration between itself and the substrate

Tremco PUMA WC is a modified polyurethane-methacrylate (PUMA) wear coat. Tremco PUMA WC is applied after Tremco PUMA BC has cured. The wear coat is loaded with aggregate to give the system excellent impact, abrasion and chemical resistance. Tremco PUMA TC is a methyl-methacrylate (MMA) top coat. Interlaminary adhesion to Tremco PUMA TC is exceedingly strong. The top coat affords excellent abrasion resistance, UV stability and chemical resistance to complete the Vulkem EWS.

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## Basic Uses

Vulkem EWS is an optimal solution for helipads. Vulkem EWS is a cold-applied, traffic deck coating system designed for waterproofing concrete slabs and protecting occupied areas underneath from water damage. Additionally, the system will protect the concrete from the damaging effects of chloride, deicing salts, chemicals, gasoline, oils and antifreeze.

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## Features and Benefits

- Polyurethane-methacrylate (PUMA) technology delivers extreme durability while maintaining its crack-bridging characteristics.
- Rapid set-up times allow for quick overall installation, as well as the ability to open up to foot traffic one hour later.
- Can be applied at temperatures below 20 °F, which allows for continuation of projects in the colder months.
- Initiator adjustments allow for 30 to 45 min cure time between applications, even at temperatures below freezing.
- Compatible with Tremco sealants and coatings, which is essential for tie-ins, detailing and penetrations.
- Extremely forgiving application allows users to apply additional coats long after the previous coat has cured.
- Unique chemistry allows for easy repair.

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## Applicable Standards

ASTM C957

CSA S413

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## Availability

Immediately available from your local Tremco Sales Representative.

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## Packaging

Tremco PUMA Primer: 6-gal pails

Tremco PUMA BC: 6-gal pails

Tremco PUMA WC: 6-gal pails

Tremco PUMA TC: 6-gal pails

Tremco PUMA Initiator: 55-lb bags

Tremco PUMA Filler Powder: 55-lb bags

Tremco PUMA Cleaner: 6-gal pails

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## Installation

Tremco PUMA components are designed for use with the Vulkem EWS and TREMproof PUMA systems. Please refer to the Vulkem EWS 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 Services for site conditions and requirements.

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## Limitations

- Do not apply to damp or contaminated surfaces.
- Use with adequate ventilation.

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## Warranty

Tremco warrants its Products to be free of defects in materials but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Tremco makes no other warranty, expressed or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE with respect to Tremco Products. Tremco's sole obligation shall be, at its option, to replace or to refund the purchase price of the quantity of Tremco Products proven to be defective, and Tremco shall not be liable for any loss or damage.

Please refer to our website at [www.tremcosealants.com](http://www.tremcosealants.com) 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.

## TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TREMCO PUMA BC (All Grades)	TREMCO PUMA WC	TREMCO PUMA TC
VOC Content	Method 310	0 g/L	0 g/L	0 g/L
% Solids (by Weight)	ASTM D1353	100%	100%	100%
Drying Time @ 75°F, 50% RH	ASTM D1640	80 mil film, 1 hr	65 mil film, 1 hr	17 mil film, 1 hr
Weathering	ASTM D822 Weatherometer 350 hr	N/A	N/A	No effect
Elongation	ASTM D638	407% - 420%	250%	130%
Elongation	ASTM D5147	Min 30%	Min 30%	Min 30%
Tensile Strength	ASTM D638 @ 75°F	991 - 1680 psi	1550 psi	986 psi
Tearing Resistance	ASTM D4073	91 lbf	148 lbf	203 lbf
Hardness (Shore D)	ASTM D2240	18 - 35	45	55
Hardness (Shore A)	ASTM D2240	65 - 87	96	100
Abrasion Resistance (1000 cycles)	ATSM D4060	N/A	N/A	51 mgm
Low-Temperature Crack Bridging	ASTM C1305	Passes	N/A	N/A
Taber Abrasion	ASTM C501	Passes	N/A	N/A
Peak Load @ 73°F, avg.	ASTM D5147	>70 lbf/in	81 lbf/in	238 lb/in
Puncture Resistance	ASTM D5602	> 56 lbs	> 56 lbs	>56 lbs
Water Absorption	ASTM D570	< 0.1%	< 0.1%	< 0.1%
Water Vapor Transmission	ASTM E96	0.03 perms	0.03 perms	0.03 perms
Adhesion-in-Peel	ASTM C794	Concrete failure with primer	35 lbs	N/A
Self-Ignition Temperature (°F)	ASTM D1929	800°	840°	850°
Smoke Density (%)	ASTM D2843	4.1%	28.7%	2.1%
Rate of Burn (in/min)	ASTM D635	1.2 in/min	1.7 in/min	0.2 in/min

O118/EWSHDS

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