

VFI®-2519 75 D BRUSHABLE HARD COAT

VFI-2519 75 D Brushable Hard Coat is a 1A:3B by volume, brush-applied polyurethane coating. It is used in conjunction with other hard coats as a patch repair or as the hard coat itself on small projects. It cures in thin films to provide structure and durability to EPS foam for theming designs and fabrications. VFI-2519 offers a long pot life for extended workability and can be applied vertically without sagging. After sanding and priming, the hard coat can be painted to blend in with existing applications or to improve the aesthetics of smaller pieces.

- Convenient brush application with no need for large, expensive spray equipment
- High rigidity with outstanding resistance to impacts
- Increases aesthetics of small projects and blends well with existing hard coats
- Great for repairs, small sections, and specific curves
- Pre-measured containers ensure mixing accuracy for quick and easy application

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Shore Hardness	ASTM D2240	75 D
Tensile Strength	ASTM D412	2,600 psi
Tensile Modulus	ASTM D638	190,000 psi
Elongation at Break	ASTM D412	7%
Flexural Strength	ASTM D790	6,000 psi
Flexural Modulus	ASTM D790	240,000 psi
Abrasion Resistance	ASTM D4060	N/A
Impact Resistance (Falling Dart, EPS Backing)	ASTM D1709	<6 in•lb
Weathering	N/A	Not UV Stable
Linear Shrinkage	N/A	N/A
Heat Deflection Temperature	ASTM D648	N/A
Standard Color	N/A	Neutral
Class A Fire Testing	ASTM E84	No

LIQUID PROPERTIES	TEST METHOD	TEST RESULTS
Solids by Volume	ASTM D2697	100%
Mix Ratio by Volume	N/A	1A:3B
Mix Ratio by Weight	N/A	1A:3.44B
Weight per Gallon A Side	ASTM D1475	10.18 lb/gal
Weight per Gallon B Side	ASTM D1475	11.79 lb/gal
Viscosity A Side	ASTM D2196	200 cps
Viscosity B Side	ASTM D2196	7,000 cps
Pot Life	N/A	15 minutes
Cure to Handle	N/A	6 hours
Recoat Window	N/A	<4 hours
Full Cure Time	N/A	7 days
Volatile Organic Compounds	N/A	0

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THICKNESS REQUIREMENTS

To develop a uniform film over the piece, apply the coating at a minimum rate of 60 mils. The best film properties can be achieved at 100 mils or greater. If subsequent coats are needed, apply them within the 4-hour recoat window for ensured adhesion. The recoat window is based on testing at 50 mils. Applying the coating at a different millage may affect the recoat window.

EQUIPMENT

VFI-2519 can be applied to any prepped substrate with a brush or trowel.

SURFACE PREPARATION

Surfaces should be clean and free of oils, dirt, debris, or other contaminants. A primer or additional sanding prep may be required, depending on the surface.

- **EPS** – The foam must be aged for at least 30 days so any gas can escape. We recommend using 2 PCF foam for an optimal cost-to-quality ratio, but 1-3 PCF is acceptable. Ensure that the surface is clean and dry before you begin applying.
- **Wood** – The wood should be dry and contain less than 11% moisture; otherwise, it should be primed or mist-coated (a light dusting followed by the main application of the coating).
- **Metal** – The surface must be cleaned by roughly sanding or sandblasting to SP6 to remove rust, mill scale, dirt, and other contaminants.
- **Existing Hard Coat** – Surfaces must be sanded and/or primed before application to ensure adequate long-term adhesion.

MIXING

Premix the Poly side (B) until uniform before combining it with the Iso side (A). The pot life can be extended by mixing smaller quantities (ex. 200 grams will yield a 15-20-minute pot life while the full mix will yield about an 8-minute pot life). If pouring the material by hand, the pre-weighed Iso must be poured into the pre-weighed Poly. Mix the two until uniform, then transfer them to a new container and mix until uniform again before using. VFI-2519 75 D Brushable Hard Coat must be fully mixed and used before the pot life expires. Mix times will vary depending on material volume and mixing method.

APPLICATION & CLEANUP

For proper adhesion, the temperature must stay between 50°F - 100°F during application. After the material cures for a minimum of 6 hours at room temperature, it can be sanded and painted to improve the aesthetics of the piece for material theming.

Tools and equipment used to apply VFI-2519 can be cleaned with xylene or MEK.

STORAGE/SHELF LIFE

The shelf life of unopened containers is 12 months after the date of manufacture. Store the product between 60°F - 90°F in a clean, dry building. Once open, use it immediately. After opening, it is possible to store unused material by nitrogen purging both sides immediately after use.

PRECAUTIONS

VFI-2519 is not a UV color-stable product and has no long-term UV testing. If it's applied to a project meant for exterior applications, it must be top coated. Isocyanate in the A side may be irritating to the skin and toxic if inhaled. Avoid prolonged breathing of vapors or repeated skin contact. Use only with adequate ventilation. Do not thin or add foreign material to this product. See Safety Data Sheet for complete safety instructions.