

VFI®-2538 70 D EPS FORM HARD COAT

VFI-2538 70 D EPS Form Hard Coat is a spray applied, 100% solids, polyurethane coating. It is capable of being sprayed over CNC or hot wire foam cut EPS to create a uniform and releasable surface when casting concrete. A hard polyurethane shell is an alternative to pourable urethane molds or epoxy coatings and allows for faster turnaround times on custom pieces. The form hard coat is easily sandable but does not always require post-work because it creates an extremely smooth finish. Its chemical makeup makes it capable of maintaining a smooth finish while providing square corners. Spraying VFI-2538 allows you to create a variety of shapes with less labor.

- Great for custom mold-making of a variety of shapes
- Flat, glass-like texture with reduced need for sanding
- Cures to handle in 5 minutes for faster mold turnaround time
- Saves time by eliminating the need to make a master and a mold box
- Comes in an alternative industrial-ready high-pressure spray system

Some usages of this product are to provide a hard shell for casting concrete and to replace existing fiberglass systems. Additionally, it works as a smooth, sandable, and paintable form for signs or small projects.

PHYSICAL PROPERTIES

Hardness Shore D	70
Tensile Strength	5,500 psi
Elongation	20%
Tear Strength	545 pli
Elastic Modulus	26,450 psi
Impact Resistance (Falling Dart)	8 ft*lbs/in @ 40 mils

LIQUID PROPERTIES

Solids by Weight	100%
Solids by Volume	100%
Liquid Density A Side	9.8 lbs/gal
Liquid Density B Side	8.4 lbs/gal
Mixed Liquid Density	9.1 lbs/gal
Specific Gravity A Side	1.18 g/mL
Specific Gravity B Side	1.01 g/mL
Specific Gravity Mixed	1.09 g/mL
Ratio by Volume (A:B)	1A:1B
Viscosity A Side	500 cps
Viscosity B Side	1,200 cps
Cure to Touch	80 seconds
Cure to Handle	5-7 minutes
Recoat Window	20 minutes

MANUFACTURER OF HIGH PERFORMANCE POLYMERS

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THICKNESS REQUIREMENTS

We recommend spraying at a minimum rate of 60 mils or greater to create the best film properties. Multiple passes can be done to increase thickness but must stay within the open window of 30 minutes. If you exceed the open window, we recommend using VFI-1007 Solvent Based Polyurethane Primer to create adhesion between layers.

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 opened, use immediately. After opening, it is possible to store unused products by nitrogen purging both sides immediately after use. If you don't nitrogen purge the material, moisture contamination can occur in the A & B sides. The moisture contamination will create a hardened film over and in the A side (Iso) and can cause pinholes and foaming in the B side (Poly) when spraying. We recommend using VFI-8403 Dryer to reduce the moisture contamination effects in the B side.

EQUIPMENT

Low Pressure - VFI-2538 requires a low-pressure machine capable of spraying through a static mix tip. The machine needs to have enough pressure to fully clear the tip in 20 seconds, or the material will set up in the static mix tip. Heating the lines and material is recommended for optimal spray pattern and properties but is not required. The recommended temperature for heating the lines and material is between 80°F-100°F.

High Pressure - A high-pressure, plural component machine capable of heating the product and providing a minimum 2500 PSI of constant pressure can also be used. The recommended settings are constant pressure between 2300-2500 PSI and line temperatures at 110°F.

SURFACE PREPARATION

- **EPS** - Ensure that the EPS has been aged at least 30 days. Anything between 1 and 3 PCF is acceptable, but for an optimal cost-to-quality ratio, we recommend using 2 PCF foam. Once clean and dry, VFI-2538 can be applied directly to the EPS.
- **Wood** - The wood should be dry and contain less than 11% moisture; otherwise, it should be primed or mist-coated (a light dusting of the coating followed by the main application of the coating).
- **Urethane or Plastic** - First, sand the urethane or plastic and then apply a general urethane primer to ensure good adhesion to the substrate.

MIXING

The B side (Poly) must be premixed until uniform before use and continuously mixed throughout the application. The A side (Iso) does not need to be mixed. Mix times will increase if stored for long periods between use.

POST-CURE

The material will need at least 3 hours to cure before heavy movement is allowed, but it is sandable within an hour. Light movement is acceptable sooner than 3 hours if needed. If spraying in thinner passes, it may require a longer post-cure time. Allow a minimum of 24 hours at 77°F for VFI-2538 to cure before casting onto the product. A release agent should be used for easy demolding.

CLEANUP

The preferred cleanup solvent is xylene or MEK. For cleaning and flushing out lines it is recommended to use our VFI-8005 pump flush to fully clean out the lines.

CROSS CONTAMINATION

VFI-2538 should be able to run behind most polyureas and polyurethanes without issue, but VFI always recommends a test mix on the side before use. The test mix can be taken by combining some of the new material with some material within the spray lines and mixing them to see if there's a reaction.

PRECAUTIONS

See Safety Data Sheet for complete safety data.

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