

VFI®-6150 50 D SPRAY HARD COAT

VFI-6150 50 D Spray Hard Coat is a premium, fast-setting, spray-applied polyurea coating. Once applied, it creates a protective shell over foam and is used for interior and exterior applications when covered with a UV-stable top coat. As a polyurea, it has good thermocycling, strong impact resistance, and is moisture insensitive. VFI-6150 is fully paintable for theming purposes. It is Class A fire-tested to meet safety requirements when needed. Its high tensile strength and elongation make it a tough, versatile coating for encapsulating and protecting a substrate.

- A 50 D hardness gives the coated layer impact resistance to absorb pressure without breaking
- Fast cure time allows it to be sprayed and painted on the same day without multiple coats
- Can be used to create an aesthetic for small and large indoor and outdoor projects
- Easy spraying and slower gel time allow it to spray smoothly in a single pass
- Class A fire testing through ASTM E84

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Hardness Shore D	ASTM D 2240	50
Tensile Strength	ASTM D 412	3,000 psi
Elongation % at Break	ASTM D 412	540%
Die C Tear Strength	ASTM D 624	400 pli
Low Temperature Flexibility (1/2" Mandrel Bend @ 0°F)		pass

LIQUID PROPERTIES	TEST METHOD	TEST RESULTS
Solids by Volume	N/A	100%
Ratio by Volume (A:B)	N/A	1A:1B
Viscosity A Side (cps @ 77°F)	N/A	600 cps
Viscosity B Side (cps @ 77°F)	N/A	450 cps
Specific Gravity A Side	ASTM D 1475	1.14
Specific Gravity B Side	ASTM D 1475	1.005
Mixed Specific Gravity	ASTM D 1475	1.07
Gel Time	N/A	12 sec
Recoat Time	N/A	20 min
Place into Service	N/A	8 hrs
VOC	N/A	0

MANUFACTURER OF HIGH PERFORMANCE POLYMERS

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THICKNESS REQUIREMENTS

For light-duty applications, 40-80 mils can be sprayed to develop a uniform film that protects the piece. 80-120 mils of coverage can be sprayed for heavy-duty applications when more physical abuse is expected. Subsequent coats can be applied as necessary within the 20-minute recoat window. Coating outside of the recoat window could result in adhesion problems.

EQUIPMENT

VFI's recommended specifications for a high-pressure, plural component spray rig is to run it at 150°F-155°F and 2,500 psi of constant pressure with high-pressure heated hoses and 10 ft whip hoses. Gun tips will vary by the project and will need to be adjusted on-site. The following machines are capable of meeting these specifications:

- Graco A-XP1 air sprayer provides up to 3,500 psi of constant pressure and 170°F with a 1.5 gal/min output and 210 ft hoses. Use with any Probler P2 or Fusion Gun.
- Graco Reactor 2 E-XP2 electric sprayer provides up to 3,500 psi of constant pressure and 190°F with a 2 gal/min output and 310 ft hoses. Use with any Probler P2 or Fusion Gun.
- Graco Reactor 2 H-XP2/XP3 hydraulic sprayers provide up to 3,500 psi of constant pressure and 190°F with 1.5 or 2.8 gal/min outputs and 310 or 410 ft hoses. Use with any Probler P2 or Fusion Gun.
- PMC PHX-2 or 25 hydraulic sprayers, ideal for small or medium-scale applications, provide up to 3,000 psi of constant pressure and 190°F with outputs just under 2 gal/min and 210-410 ft hoses. Use with the AP-2 Air Purge, PX-7 Mechanical Purge, or Xtreme Spray Gun.

SURFACE PREPARATION

EPS – the foam should be aged for at least 30 days to allow any gas to escape. We recommend 2 PCF non-recycled bead foam for an optimal cost-to-quality ratio, but anything between 1 and 3 PCF is acceptable. Once clean and dry, VFI-6150 can be applied directly to the EPS.

MIXING

Bring VFI-6150 to a minimum temperature of 65°F before use. Premix the Poly (B side) components until uniform before spraying. The time it takes to mix the product will depend on volume and mixing method. All powder should be mixed in from the bottom of the drum. The A side does not need to be premixed.

POST CURE

Once cured, VFI-6150 must be top-coated with paint or an equivalent coating for protection from UV rays. While the finished project can be placed into service in as little as 8 hours with a light application, complete curing may take up to 3 days.

CLEANUP

VFI recommends cleaning tools and spray equipment with xylene or MEK. Immediately after spraying, flush spray lines with VFI-8005 Pump Flush to prevent damage from product build-up.

STORAGE/SHELF LIFE

The material shelf life is 12 months from the date of manufacture. Store in a dry, temperature-controlled space in sealed and unopened containers between 60°F-90°F. Once open, use immediately. Opened containers can be resealed with a nitrogen purge, but the material shelf life will ultimately shorten.

PRECAUTIONS

VFI-6150 is not UV color-stable and has no long-term UV testing. Avoid prolonged breathing of vapors and repeated skin contact. When spraying, use a supplied air respirator or a respirator with forced air ventilation in a chemically approved spray booth. Do not add foreign material to the product. See Safety Data Sheet for all safety information.

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