

VFI®-3131 65 A POLYUREA HYBRID SPRAY COATING

VFI-3131 65 A Polyurea Hybrid Spray Coating is a premium, 100% solids, fast setting coating. Once applied, it creates a seamless membrane over flexible surfaces such as flexible foam. It can be used for interior or exterior applications when covered with a UV-stable top coat. As a polyurea hybrid, it has outstanding durability and good chemical resistance, with fire retardant built into its formula. Its high tensile strength and elongation make it a tough, versatile coating that provides a surface with good structural strength and rebound.

- A 65 A hardness gives the coated layer impact resistance and good rebound
- Can be used to create an aesthetic for small and large interior and exterior projects
- Easy spraying and a slower gel time allow it to spray smoothly in a single pass
- Formulated with fire retardant to meet fire safety requirements

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Hardness Shore A	ASTM D2240	65 A
Tensile Strength	ASTM D412	1,400 psi
Elongation	ASTM D412	1,400%
Elastic Modulus	N/A	900 psi
Permanent Set	N/A	5% max
Tear Strength	ASTM D624	210 pli
Solid Material Density	N/A	69.05lb/ft ³
Cold Temperature Flexibility (0.25" @ 8°F)	Mandrel Bend Test	passed
Water Vapor Permeability (0% R.H. @ 73°F 35 mil film)	N/A	1.65 perms

LIQUID PROPERTIES	TEST METHOD	TEST RESULTS
Solids by Weight	ASTM D1644	100%
Solids by Volume	ASTM D2697	100%
Liquid Density A Side	ASTM D2939	9.32 lbs/gal
Liquid Density B Side	ASTM D2939	9.14 lbs/gal
Ratio by Volume (A:B)	N/A	1A:1B
Ratio by Weight (A:B)	N/A	A:B
Viscosity A Side	ASTM D2196	2000 cps
Viscosity B Side	ASTM D2196	800 cps
Gel Time	N/A	10-15 seconds
Tack Free	N/A	30-60 seconds
VOC	N/A	up to 4 hours
Place into Service	N/A	6 hours light duty
Full Cure	N/A	3 days

MANUFACTURER OF HIGH PERFORMANCE POLYMERS

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SURFACE PREPARATION

When the surface is not properly prepared, coating failure will occur. Clean all surfaces of contaminants such as oils, dirt, or debris for ensured adhesion. Some surfaces may require a primer, so an adhesion test should be performed before coating. When applying over foam, it should be aged for at least 30 days to allow any gas to escape. We recommend non-recycled EPS bead 2 PCF foam for an optimal cost-to-quality ratio, but anything between 1-3 PCF is acceptable. Once clean and dry, VFI-3131 can be applied directly to the EPS.

EQUIPMENT

VFI's recommended specifications for a high-pressure, plural component spray rig is to run it at 150-170°F and 2,500 psi of constant pressure with high-pressure heated hoses and 10 ft whip hoses. Gun tips will vary by project and will need to be adjusted on site.

MIXING

Bring VFI-3131 to a minimum temperature of 70°F before use. Premix the Poly (B side) 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.

APPLICATION REQUIREMENTS

For light-duty applications, 40-80 mils must be sprayed to develop a uniform film that protects the piece. 80-120 mils of coverage should be sprayed for heavy-duty applications when more physical abuse is expected. Subsequent coats can be applied as necessary within the 4-hour recoat window. Coating outside of the recoat window could result in intercoat adhesion problems. Once cured, VFI-3131 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 6 hours with light application, complete curing will take up to 3 days.

CLEANUP

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

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 it immediately. Opened containers can be resealed with a nitrogen purge, but the material shelf life will shorten. Protect from exposure to moisture. Moisture may cause a hardened film over and in the A side (Iso) and cause it to generate carbon dioxide, resulting in high pressure in closed containers. If there is moisture contamination within the B side (Poly), it will cause pinholes and foaming once mixed and sprayed. VFI-8403 Dryer can be used to reduce undesired effects in the B side.

PRECAUTIONS

This product contains isocyanate, which may irritate the skin and is toxic if inhaled as particulate matter. 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 information regarding safety.

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