

VFI®-5216 16 PCF SEMI-FLEXIBLE POLYURETHANE FOAM

VFI-5216 16 PCF Semi-Flexible Polyurethane Foam is a two-component, water-blown urethane foam that is compressible with good bounce back. The 16-pounds per cubic foot expanding foam has a slow enough gel time to be machine-injected or hand-poured into a mold or form. Its self-skinning capabilities allow it to create a smooth, uniform surface for an improved appearance. With the ability to overpack, this semi-flexible foam is formulated to fill cavities and prevent voids. VFI-5216 is capable of creating many different high-density parts and shapes for prototyping, form liners, manufactured stone, precast, and more.

- Great rebound and strength allow the foam to hold its shape
- Works as a backfill material to adjust the weight of a piece
- Self-skinning capabilities create a surface that can be primed or coated
- Convenient 1A:2B mix ratio by volume for quick and easy application
- Fast final cure speed for a quick turnaround on parts

PHYSICAL PROPERTIES

Pound per Cubic Foot	16 pcf
Color	white

LIQUID PROPERTIES

	TEST RESULTS
Ratio by Volume (A:B)	1A:2B
Ratio by Weight (A:B)	100A:171B
Mixed Viscosity	1,200 cps
Mixed Liquid Density	9.06 lb/gal
Cream Time	30 sec
Rise Time	140 sec
Tack Free Time	140 sec
Demold Time	10 min
Specific Volume	108 in ³ /lb
Approximate Volumetric Expansion	4.25

**All values are based on average free rise density of 16 pcf*

MANUFACTURER OF HIGH PERFORMANCE POLYMERS

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MOLD PREPARATION

Porous materials such as natural stone, wood, and concrete must be sealed and released to prevent unwanted adhesion. Molds must be dry and coated with a release agent to extend the life of the mold. The mold must be strong enough to hold shape if subject to packing pressure. For better results, you can use a heated mold up to 120°F to speed up the demold time. However, heating the mold will also decrease the pot life and final density. Compatible molds for casting include metal, urethane, epoxy, and platinum silicone.

MIXING

The material should be brought to a minimum temperature of 65°F before use. Premix the B side (Poly) until uniform before combining with the A side (Iso). Pour the measured B side into the measured A side and mix rapidly with a drill or power mixer. Move the mixer through the center until uniform. Transfer the mixture to a new container and mix again before use. The material must be completely mixed before the 30-second cream time (initial rise).

POURING & CURING

The material should be poured immediately into the lowest point of the mold or form. Allow space for the foam to expand. Avoid scraping material from the container while pouring, as this takes time, and the material may not be fully mixed.

Once poured, the mold should not be moved while the foam rises since movement could cause cells to collapse. To prevent deformation, allow the foam to remain in the mold or form until fully cured. VFI-5216 should be allowed to cure for at least 2 hours at room temperature before removing it from the mold. Thinner pours may require a longer cure time.

CLEANUP

Clean application equipment with MEK or xylene before the foam cures. If the foam has cured, you can break it off the surface and wipe the rest off with xylene.

STORAGE/SHELF LIFE

The material should be stored in a clean, dry building between 60°F - 90°F. The Iso (A side) is required to remain above 60°F to protect it from freezing. The shelf life is 12 months from the date of manufacture. Opened containers can be resealed with a nitrogen purge immediately after use.

PRECAUTIONS

VFI-5216 contains isocyanate, which can be irritating to the skin and toxic if inhaled as particulate matter. Avoid prolonged breathing of vapors and repeated skin contact by using proper personal protective equipment. Use only with adequate ventilation. It must be protected from freezing. It is not UV color stable and has no long-term UV testing. If needed for exterior use, the foam must be painted or sealed. It is not fire retardant and is unstable in water. Do not thin or add foreign material to the product. See Safety Data Sheet for complete safety information and follow all precautions/directions.