

FusionTM

1. DESCRIPTION

FusionTM Adhesives are a two-part methacrylate, ultra violet light stable, non-yellowing surfacing adhesive designed for the seamless bonding of solid surface (acrylic and polyester and blends), engineered stone, and natural stone products. Combined at a ratio of 10:1 (10 parts resin, one part activator), FusionTM adhesives have a working time of 10 to 15 minutes and achieve nearly 90 percent of its ultimate strength in 25 to 30 minutes at room temperature curing. FusionTM adhesives offer a combination of high strength, stiffness, and toughness as well as the ability to bond very strongly to a wide variety of solid surface materials. FusionTM adhesives provide high strength bonds to acrylic solid surface, polyester solid surface (both filled and unfilled), and alloy solid surface (combinations of both acrylic and polyester solid surface resins). FusionTM adhesives give the fastest initial strength (green strength) and quickest routable time from dispensing of any of the contemporary adhesives in the market place. Take the FusionTM challenge and test it for yourself. FusionTM adhesives are the *Professionals' Choice When Seaming Countertops*.

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2. CHARACTERISTICS:

Room Temperature Cure	Properties
• Working Time	10 to 15 minutes
• Fixture Time	20 to 30 minutes
• Routable	35 to 45 minutes
• Operating Temp.	65°F to 85°F (18°C to 30°C)
• Gap Filling	.125 inches – 5 mils (thousands) for countertops
• Mixed Density	8.6 lbs/gal (.98 g/cc)
• Flash Point	51°F (11°C) – See MSDS for more safety information

3. CHEMICAL RESISTANCE:

Excellent Resistance to:	Susceptible to:
• Hydrocarbons	Polar Solvents
• Acids and Bases	Super Strong Acids and Bases
• Vinegar	
• Wine and Condiments	
• Most Household Foods	

4. PHYSICAL PROPERTIES:

Uncured:	Adhesive	Activator
• Viscosity(cps)	15,000 – 25,000	15,000 – 25,000
• Color	Clear/Various Colors	Creamy Off-White Paste
• Density (lbs/gal)	8.4	9.0
• Mix Ratio (wt or vol)	10.0	1.0
• Mixer Recommendation	Cartridge (50ml):	MBHX 05-16T – Sulzer 16 element
	Cartridge (250ml):	MFHX 08-18T – Sulzer 18 element
	Cartridge (500ml):	MFHX 08-18T – Sulzer 18 element

5. MECHANICAL PROPERTIES:

Tensile Strength (ASTM D638)	Substrate	Results	Failure Type
• Strength, psi	Acrylic Solid Surface	2,500 - 3,000	Cohesive
• Strength, psi	Polyester Solid Surface	2,500 - 3,000	Substrate

6. HANDLING AND APPLICATION:

FushionTM adhesive (Part A) and activator (Part B) are flammable. Contents include Methacrylate ester and acids, and peroxide. Keep containers closed after use. Wear gloves and safety glasses to avoid skin and eye contact. Wash with soap and water after skin contact. In case of eye contact, flush with water for 15 minutes and get medical attention. Harmful if swallowed. Keep out of the reach of children. Keep away from heat, sparks, and open flames. Do not smoke cigarettes or anything else while handling or near the product. Refer to the FushionTM Material Safety Data Sheet for more complete safety instruction. To assure maximum bond strength, surfaces must be mated together within the specified working time, and all clamps affixed within that time. Use sufficient material to ensure that the joint is completely filled when parts are mated and clamped. Avoid over clamping parts, which may cause a dry joint or a joint starved of adhesive. All adhesive application, part positioning, fixturing, and clamping should occur before the working time of the adhesive has expired. After the indicated working time, parts must remain undisturbed until the fixture time is completed. Sheet, adhesive, and shop temperature can have a significant effect on the work and fixture time of the adhesive. Application of FushionTM adhesive at temperatures between 65°F and 85°F (18°C and 30°C) will ensure proper cure. Temperatures below 65°F (18°C) will slow cure and fixture speed. FushionTM adhesives will still react, but will take longer. Temperatures above 85°F (18°C and 30°C) will increase cure and fixture speeds, and there's a risk that the adhesive will be hardened or too thick to pull a tight seam. The viscosities of FushionTM adhesives are affected by temperature.

NOTE: Because of the rapid curing features of FushionTM adhesives, large amounts of heat are generated when large masses of material are mixed at one time. The heat generated by the exothermic reaction resulting from mixing large amounts of adhesive can result in a boiling of the monomer in the adhesive (methyl methacrylate), resulting in the release of trapped air, steam and volatile gasses. To prevent this, use only enough material as needed for use within the working time for the product, and confine the gap or spread out the material to no more than .125 inches.

7. HANDLING AND STORAGE

The shelf life of FushionTM is two (2) years from the date of manufacture based upon continuous storage at room temperature (77°F or 25°C). Storage of FushionTM in refrigerated compartments will extend the shelf life even more. Do not store FushionTM or any other adhesives in a refrigerator which has food or lunch products in them. Be sure to bring FushionTM adhesives to room temperature for 24 hours before use, otherwise longer cure and fixture times may be expected. Long-term storage at temperatures above room temperature will shorten the shelf life of FushionTM adhesives, especially the activity of the catalyst. Storage at temperatures above 100°F or 38°C could shorten the shelf life to less than one month. FushionTM adhesives contain no water, so freezing of the adhesive for short periods is permissible, but is not encouraged.

8. ADDITIONAL INFORMATION

NOTE: All information on this data sheet is based upon laboratory testing and is not intended for design purposes. Doyle Farris Adhesive Company makes no representations or warranties of any kind concerning this data. Due to the variance of storage, handling, and application of these materials, Doyle Farris Adhesive Company cannot accept liability for results obtained.