FE7004

One of the most versatile two component adhesive in our line. Easy product to mix by hand or meter/mix equipment. Features high shear strength with high impact, chemical and water resistance. Service temperatures can range from -100°F to 200°F with blending ratios from 1:1 by volume (flexible) to 2:1 by volume (rigid). Typical applications include wood lamination for sporting goods, potting small parts for electronics and as an all purpose adhesive. Great adhesion to most metals and rigid plastics, (including Delrin ®), rubber, concrete, wood, ceramics and most other fabricating materials.

Technology / Base	Epoxy
Type of Product	Structural Adhesive
Components	Two Component
Curing	Room Temperature (secondary thermal cure)
Appearance / Color	Amber
Consistency	Liquid

Features and Benefits

- Excellent Bonding to Metals, Wood, Coatings, Ceramics, Glass and Most Plastics
- Excellent Chemical Resistance
- Suitable for Cartridge and MMD Dispensing Equipment
- Excellent Thermal Performance
- 100% Reactive
- Room Temperature Cure
- 1:1 or 2:1 volume mix product for easy meter or static mix of application

Technical Data

Rheology	**Value**	**Condition/Method**
Viscosity - Part A	3500 cPs	at 25°C
Viscosity - Part B	5000 cPs	at 25°C
Viscosity - Mixed	4000 cPs	at 25°C
Uncured Material Characteristics		
Specific Gravity - Part A	1.15	
Specific Gravity - Part B	0.959	
Specific Gravity - Mix	1.09	
Volume Mix Ratio	100 to 50 (rigid) 100 to 100 (flexible)	
Weight Mix Ratio	100 to 42 (rigid)	
Gel Time	50 to 70 min	at 25°C
Full Cure @ 23°C	10 to 14 days	
Full Cure @ 66°C	3 to 4 hours	
Shelf Life	12 months unopened	
Cured Mechanical Properties		
Hardness	78 Shore D (rigid ratio) 73 Shore D (flexible ratio)	ASTM D2240 ASTM D2240
Overlap Shear Strength		
Aluminum, Acid Etched at 25°C	17.2 MPa (2500 psi) (rigid ratio) 35.9 MPa (5200 psi) (flexible ratio)	ASTM D1002, 25°C 50% RH ASTM D1002, 25°C 50% RH
Operating Temperature	-73°C to 95°C (-100°F to 200°F)	
Cured Electrical Properties		
Dielectric Constant	2.88 at 23°C, 100Hz	ASTM D150

General Instructions

Surfaces must be clean, dry and free from grease, oil, paint, wax and weak oxide films and other surface contaminants. Chemical etching, sanding or grit blasting often gives the best results. Bring both components to room temperature prior to mixing. Just prior to using, blend the two components, Part A and Part B, in the ratio above. Stir the two components together thoroughly, being certain to scrape in all material from the walls and bottom of the mixing container. Materials can be hand stirred. Mechanical mixing is preferable, but should be carried out at slow speeds (<300 rpm), taking as little air as possible into the adhesive batch. Spread a thin layer of the mixed adhesive on one or both of the parts to be bonded. Once the adhesive is applied, no open time is necessary. The surfaces can be assembled immediately. Parts should be assembled while the adhesive is still wet to the touch before it sets. The individual parts, the ambient temperature and the adhesive itself will dictate the open time permitted.

H.B. Fuller Company
1200 Willow Lake Boulevard
St. Paul, MN 55164
+1.651.236.5900 tel

www.hbfuller.com

www.hbfullerengineering.com

Specifications and Approvals

FMC 9681-01, 11918NC-5, WS 11539B, JCM 14317 Rev. C, BMS 11825, LMS 11825-1, WS-11539-801PAT, HMS 20-1744, WS 3490, WS 17351, WS 11539B, MIS 20163, WS 11540

Handling and Clean-Up

See SDS for handling and clean-up information.

Storage

Product should be stored in a cool dry place out of direct sunlight. Shelf life is based on the products being stored properly at temperatures between 12°C and 25°C and is 12 months from Date of Packaging, unless a different shelf life is designated by an OEM Specification. Exposure to temperatures above 25°C will reduce the shelf life. This product should not be frozen.

Use Note

If crystallization occurs in the containers of this product's part A, warm the product to 120°F to 140°F and it will return to its original liquid state. However, stir before using. Refer to the SDS for detailed information.

Safety and Disposal

See SDS for safety and disposal information.

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