FA-8 / BA-5

FA-8 is an unfilled gyro grade epoxy adhesive having good dimensional stability. It is useful in application for bonding and sealing beryllium and other metals. The activator, BA-5, is colored making it easy to tell when the adhesive is properly mixed.

General Information

Technology / Base	Epoxy
Type of Product	Bonding and Sealing Adhesive
Components	Two Component
Appearance / Color	Green
Consistency	Liquid

Features and Benefits

- Good dimensional stability

Technical Data

Properties (uncured)	Part A (FA-8)	Part B (BA-5)	Unit
Color	Clear	Green	-
Mix Ratio by Weight[1]	100	13.5	-
Viscosity of mixed adhesive at Room Temperature	6,000		cPs
Surface Tension	52		dyne/cm
Work Life at Room Temperature	90		minutes
Tack Free Time at Room Temperature	240		minutes
Curing Time at 200°F	2		hours

Properties (cured)	Cure Cycle			Unit
	2 hours at 200°F	8 hours at 200°F	1 hour at 140°F 16 hours at 160°F	
Color	Green	Green	Green	-
Specific Gravity	1.20	1.19	1.19	-
Hardness, Shore D	83	85	85	-
Lap Shear Strength, to Aluminum				
at -65°F	2,250	-	-	psi
at 77°F	2,650	2,300	2,500	
at 200°F	1,275	-	-	
at 77°F after aging 1 year at 300°F	2,250	-	-	
Flexural Strength at 77°F	18	15	18	ksi
Flexural Modulus at 77°F	760	690	720	ksi
Glass Transition Temperature				
by DSC	165	205	193	°F
by TMA[2]	130	208	212	°F
Weight Loss after aging 6 months at 300°F	8.8	-	-	%

[1] Activator BA-9 (BA-5 without color and thickeners) may be used at a ratio of 12.5 parts by weight of BA-9 to each 100 parts by weight of FA-8. Cured properties are the same but the color is clear light amber.
[2] Measured by Thermal Dilatometry using DuPont model 946 TMA with Model 1090 Data Analysis Station.

Properties (cured)	Cure Cycle			Unit
	2 hours at 200°F	8 hours at 200°F	1 hour at 140°F 16 hours at 160°F	
Coefficient of Linear Thermal Expansion[2]				/°F
-65°F to 77°F	29 x 10^{-6}	29 x 10^{-6}	30 x 10^{-6}	
77°F to 160°F	60 x 10^{-6}	35 x 10^{-6}	39 x 10^{-6}	
77°F to 200°F	74 x 10^{-6}	39 x 10^{-6}	41 x 10^{-6}	
Dielectric Constant at 77°F and 1kHz	3.80	3.73	-	-
Dissipation Factor at 77°F and 1kHz	0.005	0.008	-	-
Volume Resistivity	> 1 x 10^{16}	> 1 x 10^{16}	-	Ω-cm
Weight Change in Water, 24 hours at 77°F	0.12	0.20	0.20	%
Weight Change in Solvent, 24 hours at 77°F immersion / plus 24 hours dry at 135°F				%
Methanol	0.54/0.21	0.25/0.05	0.50/0.13	
Toluene	0.02/0.00	0.04/0.03	0.02/-0.02	
Methylene Chloride	Dissolved	4.57/0.23	Dissolved	
2-Butanone (MEK)	0.22/0.06	0.03/0.02	0.13/0.00	
CFC-113	0.01/0.00	0.02/0.02	0.00/-0.02	
n-Hexane	0.00/0.00	0.02/0.02	0.01/-0.03	

Safety, Cleaning, and Disposal

Please read the Safety Data Sheet (SDS) for proper handling and disposal instructions.

Application Instructions

Stir the contents of the container before removing material. If the contents are cloudy, hard or lumpy, warm to 200°F and mix thoroughly. Prolonged storage may result in crystallization of the resin. Warming to 200°F will melt the resin and restore the adhesive to its original consistency. Weigh the two components accurately so that each specified amount does not vary more than 5%.
At Room Temperature, weigh 100 parts of adhesive into one container and 13.5 parts of activator into a second container. Mix well until the color is uniform. Cure as recommended.

Storage Conditions and Shelf Life

The shelf life of FA-8 and BA-5 is 2 years from the date of packaging when stored below 85°F in the original unopened container. The storage life of premixed and frozen material (PMF) is 1 year when stored at temperatures below -40 °F (-40 °C).

Typical Packaging

Quart kit; Premixed, Degassed, and Frozen (PMF)

Specifications and Approvals

N/A

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