TECHNICAL DATA SHEET

TDS# 2509

DATE: JUNE 2013

BACON INDUSTRIES

ADHESIVE LCA-9

Adhesive LCA-9 is a filled gyro grade adhesive having an exceptionally low coefficient of thermal expansion. It exhibits excellent adhesion to aluminum and beryllium and has good chemical resistance.

RECOMMENDED MIXING AND HANDLING PARAMETERS

Adhesive	LCA-9
Activator	BA-5
Parts by weight of activator required per hundred of adhesive	4.50
Viscosity of mixed adhesive, poise	
at room temperature	paste
at 160°F	50
Work Life at room temperature, minutes	90
Pot Life (tack-free time) at room temperature, minutes	180

TYPICAL PROPERTIES OF CURED ADHESIVE:

	Cure		
	2 hr at 200°F	8 hr at 200°F	1 hr at 140°F + 24 hr at 160°F
Specific Gravity (ASTM D792-A)	1.72	1.72	1.72
Color[1]	Green-Tan	Green-Tan	Green-Tan
Hardness (ASTM D2240), Shore D	93	93	93
Lap Shear Strength to aluminum (ASTM D1002), psi			
at -65°F	2900	2700	2200
at 75°F	2200	2200	2800
at 200°F	1700	1800	2900
Bond Strength to aluminum at 77°F			
after 6 months at 300°F (ASTM D1002), psi	2200	---	---
Flexural Strength (ASTM D790), psi	16000	18000	13000
Young's Modulus in Flexure (ASTM D790), 10^6 psi	1.91	1.70	1.40
Glass Transition temperature			
by Dif. Scanning Calorimetry, °F	183	216	200
by Thermal Mech. Anal., °F	162	219	192
Loss in Weight after ageing six months at 300°F, %	0.6	---	---
Coeff. of Linear Therm. Exp. (ASTM E831), 10^{-6}/°F			
between -185°F and -65°F	11.5	9.5	10.0
between -65°F and 80°F	11.5	12.0	12.0
between 85°F and 135°F	18.0	14.5	14.5
between 250°F and 300°F	54.0	54.0	54.0

(over)

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Weight Change in water, %			
24 hr immersion (ASTM D570-A)	0.04	0.05	0.04
plus drying 24 hr at 120°F	-0.01	-0.01	0.00
Weight Change after 24 hr in solvent plus drying 24 hr at 120°F			
Methanol	-0.002	-0.013	-0.010
Toluene	-0.002	-0.013	-0.005
Methylene Chloride	1.170	0.006	0.179
Acetone	-0.007	-0.005	-0.008
CFC 113	0.002	0.001	-0.003
n-Hexane	-0.002	0.002	-0.002
Chloroform	0.158	0.000	0.008

Each batch of Adhesive LCA-9 is tested to insure absence of volatiles and compatibility with BTFE and CTFE gyro fluids.

INSTRUCTIONS FOR USE:

Mix, at room temperature, 100 parts by weight of Adhesive LCA-9 with 4.50 parts by weight of Activator BA-5. Mix well until homogenous. Cure as recommended.

NOTE:

1. Stir well the contents of the Adhesive LCA-9 container before use. If the contents contain crystals or are lumpy, warm to 200°F and mix thoroughly until homogenous before removing material. Prolonged storage at room temperature or low temperatures may cause the resin to solidify. Warming to 200°F will melt the resin and restore the adhesive to its original consistency.
2. Before mixing, BE SURE that both the adhesive LCA-9 and activator BA-5 are at room temperatures.
3. Weigh ingredients accurately so that each amount specified does not vary by more than 5%.
4. Activator BA-9 (BA-5 without color and thickener) may be used at a ratio of 4.2 parts of BA-9 to each 100 parts of adhesive. The cured properties are the same but the color of the cured adhesive is tan.

FOR INDUSTRIAL USE ONLY! WARNING!!

May cause injury to skin following prolonged or repeated contact. Use with adequate ventilation. Refer to Material Safety Data Sheets for detailed health and safety information.

SHELF LIFE:

The shelf life of these materials are greater than two years when stored in unopened containers at an average temperature below 85°F.

AVAILABILITY:

Adhesive LCA-9/BA-5 and LCA-9/BA-9 are available in quart and four fluid ounce kits, and Adhesive LCA-9/BA-9 is available in One-Shot kits (see Data Sheet No. 2011). Prices are listed on Data Sheet No. 2201. These systems are available also in Freeze-Paks. See Data Sheets No. 2031 and 2032.