

Product Bulletin

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ESG-215
GRAPHITE FILLED HIGH TEMP
EPOXY PATCHING PASTE

REV: 0302

DESCRIPTION

ESG-215 GRAPHITE FILLED HIGH TEMP EPOXY PATCHING PASTE was developed to meet the requirement of the aircraft and aerospace industry for use in repairing surface defects and for minor engineering changes in tools and dies for high temperature use. ESG-215 is not only compatible with ES-215-IHG and EL-IHL-315 systems, but is also compatible with epoxy/graphite pre-preg systems. ESG-215 is hygienically safe for shop usage as it does not contain MDA or VCHD.

HANDLING CHARACTERISTICS @ 25°C/77°F

Mix Ratio	(parts by weight)	100:14
	(parts by volume)	5.40:1
Density (Mixed)	(lbs/gallon)	11
	(lbs/in3)	0.047
Specific Gravity	(g/cc)	1.32
Viscosity		
Resin	(cps)	9,000,000
Hardener	(cps)	20
Mixed	(cps)	thixotropic
Work Life	(minutes)	25-35
Tack Free Time	(hours)	2-4
Demold Time	(hours)	4-5
Color		
Resin		Black
Hardener		Amber
Mixed		Black
Shelf Life (Months - Unopened at 25°C/77°F)		12

PHYSICAL PROPERTIES

Ultimate Tensile Strength (psi) (ASTM D-638.91)	6,276
Tensile Modulus (psi) (ASTM D-638.91)	989,600
Tensile Elongation (psi) (ASTM D-638.91)	0.875
Ultimate Compressive Strength (psi) (ASTM D-695.91)	14,420
Compressive Modulus (psi) (ASTM D-695.91)	250,800
Ultimate Flexural Strength (psi) (ASTM D-790.92)	11,500
Flexural Modulus (psi) (ASTM D-790.92)	667,400
CTE (in/in/F)	0.000285

Continued on reverse

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PHYSICAL PROPERTIES (CONT.)

Heat Deflection Temperature @ 66 PSI (°C/°F) (ASTM D-648.82).....	131/268
Heat Deflection Temperature @ 264 PSI (°C/°F) (ASTM D-648.82).....	121/249
Notched Izod Impact Strength (in-lb/ft) (ASTM D-256.93A).....	4.01
Moisture Absorption (%) (ASTM D-570.88).....	0.142
Hardness (Shore D).....	88-91
Shrinkage (in/in).....	0.005

CURE CYCLE

- 8 hours @ 77°F
- 3 hours @ 150°F
- 3 hours @ 250°F
- 3 hours @ 350°F

ALTERNATIVE CURE

ESG-215 can be cured with a heat gun or heat lamp and cured the rest of the way during use.

SPECIFICATIONS

Boeing MMS-101 and M41-03-01 Code HPAP