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Technical Data Sheet

Magnobond 6398 A/B Magnolia 6398 A/B

Description

Magnobond 6398 A/B is a two-component thixotropic paste epoxy system designed for bonding metals and composite structures. Magnobond 6398 A/B has good properties at high and low temperatures using a room temperature cure.

Properties

Property	Magnobond 6398 A/B
Cure Schedule	7 days @ 77°F or 1 hour @ 150°-250°F
Mix Ratio - Parts by Weight (Part A:Part B)	100:27
Pot Life, 3 ounces	80 minutes
Shelf Life	A: 12 Months @ <75°F or 18 Months @ 40°F or below B: 12 Months @ <75°F
Specific Gravity	Part A: 1.3 Part B: 1.0 Mix: 1.25
Viscosity @ 77°F	Part A: Paste Part B: Paste Mix: Paste

* Magnolia considers Shelf life to be Date of Receipt unless otherwise noted.

Other Properties

Lap Shear Strength, ASTM D1002, Aluminum to Aluminum

Test Conditions

10 minutes @ -67°F

75°F

10 minutes @ 250°F

10 minutes @ 300°F

10 minutes @ 350°F

10 minutes @ 400°F

10 minutes @ 500°F

75°F after 30 days @ 120°F and 95% relative humidity

75°F after 30 days @ 49°F and 100% relative humidity

75°F after 30 days in distilled water

75°F after 30 days in salt spray (ASTM B 117)

75°F after 7 days in hydraulic oil

75°F after 7 days in JP-4

75°F after 7 days in lubricating oil, MIL-PRF-23699

75°F after 7 days in Skydrol 500B

Creep rupture, 75°F,

Creep rupture, 180°F,

Test Value

4,200 psi

4,700 psi

3,000 psi

2,100 psi

900 psi

400 psi

375 psi

3,800 psi

4,025 psi

5,325 psi

4,550 psi

4,200 psi

3,600 psi

5,729 psi

5,413 psi

1600 psi

800 psi

<0.005 in.

<0.005 in.

The above values were obtained using a cure schedule of 7 days at room temperature.

Lap Shear Strength testing to FMS-4500A

<u>Test Conditions</u>	<u>5 day/RT Cure</u>	<u>2 hours/250°F Cure</u>
10 minutes @ -67°F	4,800	4,800
75°F	4,600	5,000
10 minutes @ 200°F	2,400	3,400
10 minutes @ 300°F	1,700	2,000
7 days water immersion		
75°F	4,200	5,000
200°F	3,100	3,000
7 days, condensing humidity		
75°F	4,200	4,200
200°F	2,800	2,800
7 days MIL-L-7808 (engine oil)		
75°F	4,500	4,500
200°F	3,100	3,300
7 days MIL-H-83282 (hydraulic oil)		
75°F	4,800	4,600
200°F	3,300	3,300
<u>Test Conditions</u>	<u>5 day/RT Cure</u>	<u>2 hours/250°F Cure</u>
7 days MIL-H-5606 (hydraulic oil)		
75°F	4,800	3,900
200°F	3,100	3,500
7 days MIL-T-5624 (JP-4)		
75°F	4,400	4,600
200°F	2,800	3,700
7 days MIL-A-8243 (anti-icing)		
Type I		
75°F	4,700	5,000
200°F	2,300	3,300
Type II		
75°F	4,200	4,200
200°F	2,800	2,800

Tensile Properties (ASTM D-638)

<u>Test Conditions</u>		<u>Test Value</u>
Tensile Strength	@ RT	6,000 psi
	@ 225°F	3,000 psi
Tensile Elongation	@ RT	3.10%
	@ 225°F	3.70%

Compressive Properties (ASTM D-695)

Ultimate Compressive Strength	@ RT @ 225°F	10,000 psi 3,700 psi
Compressive Modulus	@ RT @ 225°F	300,000 psi 200,000 psi
Thermal Conductivity, ASTM D-2214		4×10^{-4} cal cm/sec cm ² °C
Shore D Hardness @ RT		80 - 85
Tensile Strength		6000 psi
Tensile Elongation		6 %

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