COMPARTATIVE DATA - PC 1001/PC 1080

Handling Properties at 25°C	Epalloy® 8250/Ancamine® 2280	Epalloy® 8250/PC 1001	Epalloy® 8250/PC 1080	Test Method
Resin Density, g/cm^3	1.19-1.21	1.19-1.21	1.19-1.21	ASTM D1475
Resin Viscosity, cP	18,000-28,000	18,000-28,000	18,000-28,000	ASTM D2196
Resin EEW, g/eq	165-178	165-178	165-178	Theoretical
Hardener Density, g/cm^3	1.06	1.044	1.056	ASTM D1475
Hardener Viscosity, cP	450	340	310	ASTM D2196
Hardener AHEW, g/eq	110	64	110	Theoretical
Mix Ratio By Weight	100A to 64B	100A to 37B	100A to 64B	Calculated
Mix Ratio By Volume	1.4A to 1B	2.3A to 1B	1.4A to 1B	Calculated
Stoichiometric Index (A/B)	1.00	1.00	1.00	Theoretical
Initial Mixed Viscosity, cP	4,230	4,620	1,420	ASTM D2196
Gel Time, min:sec	49:23:00	64:44:00	39:07:00	ASTM D2471
Mechanical Properties	Epalloy® 8250/Ancamine®2280	Epalloy® 8250/PC1001	Epalloy® 8250/PC1080	Test Method
Izod Impact, Notched, ft-lb/in	0.628	0.719	1.219	ASTM D256
Tensile Strength, psi	7,484	10,965	9,764	ASTM D638
Tensile Modulus, psi	TBD[1]	TBD[1]	TBD[1]	ASTM D638
Elongation at Yield, %	7.89	7.12	8.50	ASTM D638
Elongation to Break, %	7.89	7.12	8.50	ASTM D638
Heat Deflection Temperature, °F	176	217	146	ASTM D648
Compressive Strength, psi	9,781	13,941	12,060	ASTM D695
Flexural Strength, psi	9,607	20,096	15,645	ASTM D790
Flexural Modulus, psi	362,376	449,373	435,271	ASTM D790
Cured Density, g/cm^3	1.180	1.185	1.182	ASTM D792
Volumetric Shrinkage, %	3.38	2.48	3.44	ASTM D792
Hardness, Shore D	86	88	88	ASTM D2240

[1]TBD=To Be Determined

1. Ambient Temperature=70-73°F
2. Ambient Humidity=30-50%
3. Viscosity was measured using a Brookfield RV DV-II+ viscometer and RV spindle 4 at 10-20 rpm.
4. Gel Time was measured in a 150 gram mass.
5. The cure schedule for mechanical property testing was 24 hours at ambient temperature followed by 2 hours at 150°F, 4 hours at 200°F and 2 hours at 250°F.

Notes

Larger test specimens (HDT, Hardness) prepared using Epalloy® 8250 and Ancamine® 2280 developed surface fractures during the post cure. The depth of these fractures was approximately 0.10 inches. Test specimens prepared using Epalloy® 8250 and the PC 1001 Hardener did not exhibit this anomaly.

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3/17/2009