



# ECI TECHNICAL EVALUATION

Development of a Fast Set Hardener that does not contain TMD or Nonyl Phenol

	Ancamine 2089M	FS-289 Polyamine	16-2	16-3	16-4	16-5	16-6	FS-290 Polyamine	16-8
<b>A.E.W.</b>	75	75	71.4	75	75	75	75	75	75
<b>PHR L.E.R.</b>	40	40	38	40	40	40	40	40	40
<b>Viscosity, Hardener</b>	100	80	110	190	80	125	290	130	90
<b>Gel Time, 200 g.</b>	11	10	13	14	10	16	12	10	25
<b>Tack Free, 10 mils</b>									
AT 75 F	1:30	1:30	1:30	1:45	1:45	2:45	2:30	1:30	3:00
At 45 F	4:15	3:00	3:30	4:00	5:00	5:00	5:00	4:30	8:30
<b>Thin Film Set, 10 mils</b>									
At 75 F	2:30	2:10	2:30	2:30	2:30	3:30	3:15	2:15	3:50
At 45 F	>7:30	7:00	7:30	7:00	6:40	7:30	7:30	6:00	>8:00
<b>Compressive</b>									
Strength, 7 Day	12220	11,275	12,155	11,635	12110	12,390	12,570	12,700	13,530
<b>Glass Transition Temp F</b>	162	167.2	180.1	189	NT	NT	NT	175.1	NT
<b>Chemical Resistance</b> % Wt Change (immersion)									
<b>Gasoline</b>									
after 7 days	-0.02	0	-0.04	-0.01	-0.05	0.14	-0.08	0	0
after 30 days	0	0.1	0	0	0	-0.07	-0.09	0.04	0.2
<b>30% Sulfuric Acid</b>									
after 7 days	0.25	0.25	0.29	0.21	0.22	0.18	0.37	0.14	0.29
after 30 days	0.43	0.4	0.64	0.4	0.4	0.34	0.8	0.3	0.65
<b>DI H2O</b>									
after 7 days	0.31	0.31	0.3	0.35	0.34	0.22	0.29	0.33	0.43
after 30 days	0.68	0.72	0.78	0.86	0.79	0.7	0.7	0.72	0.97
<b>10% Na OH</b>									
after 7 days	0.3	0.33	0.29	0.3	0.23	0.33	0.26	0.21	0.37
after 30 days	0.63	0.74	0.64	0.64	0.54	0.75	0.57	0.55	0.76
<b>Xylene</b>									
after 7 days	4.93	3.86	2.12	2.91	2.69	8.51	3.4	2.06	3.16
after 30 days	7.84	6.11	5.12	5.31	6.11	13.16	5.07	5.16	5.71

NT = Not Tested