

Table 2 THICKENING OF AMINE HARDENERS WITH RESIN-GRADE 144 ASBESTOS

Formulation	Parts by Wt. BAKELITE ZZL-0814.....100 Resin-Grade 144 Asbestos.....4			Parts by Wt. BAKELITE ZZL-0820.....100 Resin-Grade 144 Asbestos.....4			Parts by Wt. BAKELITE ZZL-0854.....100 Resin-Grade 144 Asbestos.....4		
	RPM.		Thixotropic Index (T. I.)	RPM.		Thixotropic Index (T. I.)	RPM.		Thixotropic Index (T. I.)
Brookfield RVF Viscosity, cps. $\times 10^{-3}$	2	20		2	20		2	20	
24 hours	187	36	5.3	67	32	2.1	102	23	4.5
7 days	172	34	5.1	66	32	2.1	104	23	4.6
30 days	177	34	5.2	67	35	1.9	104	24	4.4
Vertical Drawdown	Mil			Mil			Mil		
Room Temperature (R. T.)	70			40			40		
50°C.	20			—			—		
80°C.	—			40			40		
30 days at R. T.	70			40			40		
30 days at 80°C.	—			40			40		

Table 3 shows the thickening of a low-viscosity, cyclo-aliphatic epoxide, BAKELITE ERL-4221, with Resin-Grade 144 Asbestos and "Armac" C, a long chain aliphatic amine salt. BAKELITE ERL-4221 is the exception that requires an amine salt to be used with Resin-Grade 144 Asbestos for viscosity build-up or thixotropic stabilization.

Table 3 THICKENING OF A LOW-VISCOSITY, CYCLO-ALIPHATIC EPOXIDE WITH RESIN-GRADE 144 ASBESTOS AND "Armac" C

Ingredient	Parts by Wt.		
BAKELITE ERL-4221.....	100		
Resin-Grade 144 Asbestos.....	7		
"Armac" C.....	5		
Brookfield RVF Viscosity, cps. $\times 10^{-3}$	RPM.		Thixotropic Index (T. I.)
	2	20	
Initial	262	42	6.3
8 Weeks at 25°C.	268	36	7.4
7 Weeks at 40°C.	243	38	6.4

Systems evaluation

BAKELITE ERL-2774/ZZL-0814

With a Resin-Grade 144 Asbestos loading of 4 per cent on both resin and hardener, it was possible to hold a 70-mil thickness at room temperature. Higher loadings on the amine should result in much higher vertical drawdown.

BAKELITE ERL-2774/ZZL-0820

A 4-per cent loading of Resin-Grade 144 Asbestos resulted in a 40-mil thickness that did not sag within 40 minutes at 80°C. The system was gelled at that time.

BAKELITE ERL-2774/ZZL-0854

With a 4-per cent loading of Resin-Grade 144 Asbestos, it was possible to hold a 40-mil thickness at 80°C. until gelled (65 minutes).