

Polyurethane Specialty Products Group

VERSATHANE® A-85

TDI-Polyester Prepolymer

Prepolymer Properties

		Specifications	Typical
NCO (%)		3.4 - 3.8	3.6
Viscosity (cPs)	- 70 °C	≤ 3,600	2,650 - 3,600
	- 100 °C	-	~ 700
Specific Gravity	- 100 °C	-	1.15
Appearance		-	White, Waxy Solid
Residual TDI (%)		< 0.7	< 0.5

Processing and Elastomer Properties for Multiple Curatives

MBOCA Cured

Processing Conditions

Stoichiometry (%)	95
Versathane Temperature (°C)	100
MBOCA Temperature (°C)	110 - 115
Mold Temperature (°C)	100
Pot Life (Min.) - 100 °C	8 - 10
Gel Time (Min.)	10 - 14
Demold Time (Min.)	60
Post Cure (Hrs./Temp. °C)	16/100

Typical Elastomer Properties

Stoichiometry (%)	85	90	95	100
MBOCA Level (PPH)	9.6	10.3	10.9	11.4
Hardness (A)	85	85	85	85
Modulus psi (MPa)				
100% Elongation	760 (5.2)	770 (5.3)	800 (5.5)	780 (5.4)
300% Elongation	1,380 (9.5)	1,300 (9.0)	1,410 (9.7)	1,420 (9.8)
Tensile Strength psi (MPa)	5,700 (39.3)	6,000 (41.4)	6,300 (43.4)	6,200 (42.7)
Elongation (%)	580	585	590	620
Tear Resistance PLI (N/mm)				
Die C	435 (76)	460 (81)	465 (81)	440 (77)
Split	230 (40)	260 (46)	265 (46)	260 (46)
Compression Set (%), Method B:				
25% deflection, 22 hrs. at 70 °C	27	28	32	41
Rebound (%)	27	30	30	30
Compression Modulus psi (MPa)				
10%	300 (2.1)	320 (2.2)	330 (2.3)	330 (2.3)
25%	650 (4.5)	700 (4.8)	725 (5.0)	700 (4.8)
Specific Gravity	1.27	1.27	1.27	1.27
NBS Abrasion Index (%)	-	150	-	-
Taber Abrasion, mg. loss	-	90	-	-

Versalink® MCDEA Cured

Processing Conditions

Versalink MCDEA Level, 95% Stoichiometry (%)	14.7
Versathane Temperature (°C)	100
Mold Temperature (°C)	100
Pot Life (Min.) - 100 °C	1.5
Demold Time (Min.)	60
Post Cure (Hrs./Temp. °C)	48/130

Typical Elastomer Properties

Hardness (A)	95
Modulus psi (MPa)	
100% Elongation	1,400 (9.7)
200% Elongation	1,700 (11.7)
300% Elongation	2,300 (15.9)
Tensile Strength psi (MPa)	7,900 (54.5)
Elongation (%)	550
Tear Resistance PLI (N/mm)	
Die C	621 (109)
Split	159 (28)
Rebound (%)	41
DMA Modulus Drop (°C)	171
Vicat Softening (°C)	187
Onset Melt (°C)	217



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