

Polyurethane Specialty Products Group

AIRTHANE® PST-90A

TDI-Polyester Prepolymer

Prepolymer Properties

		Specifications	Typical
NCO (%)		4.2 - 4.6	4.4
Viscosity (cPs)	- 50 °C	≤ 7,500	6,500 - 7,000
	- 70 °C	≤ 2,100	1,700 - 2,000
Specific Gravity	- 70 °C	-	1.15
Residual TDI (%)		< 0.1	-

Processing and Elastomer Properties for Multiple Curatives

MBOCA Cured

Processing Conditions

MBOCA Level, 95% Stoichiometry (%)	12.5
Airthane Temperature (°C)	85
Pot Life (Min.) - 85 °C	7
Mold Temperature (°C)	100
Demold Time (Min.)	15
Post Cure (Hrs./Temp. °C)	15/100

Typical Elastomer Properties

Hardness (A)	90
Modulus psi (MPa)	
100% Elongation	1,100 (7.6)
200% Elongation	1,400 (9.7)
300% Elongation	2,000 (13.8)
Tensile Strength psi (MPa)	7,900 (54.5)
Elongation (%)	530
Tear Resistance PLI (N/mm)	
Die C	610 (107)
Split	145 (25)
Compression Set (%), Method B:	
25% deflection, 22 hrs at 70 °C	20
Rebound (%)	25
NBS Abrasion Index (%)	170
Brittleness Temperature (°C)	- 50
Specific Gravity	1.26
Linear Shrinkage (%)	1.2
Linear Coefficient of Thermal (μM/M/°C)	237.5
Expansion at 25 °C	
Electrical Properties	
Breakdown Voltage (KV)	34.1
Dielectric Strength V/mil (KV/mm)	279 (11.0)
Dielectric Constant at 1,000 Hz	7.61
Volume Resistivity (Ohms-Cm)	3.0 x 10 ¹³
Power Factor	0.0532

Versalink® MCDEA Cured

Processing Conditions

Versalink MCDEA Level, 95% Stoichiometry (%)	17.9
Airthane Temperature (°C)	80
MCDEA Temperature (°C)	100
Pot Life (Min.) - 80 °C	3
Mold Temperature (°C)	130
Demold Time (Min.)	30
Post Cure (Hrs./Temp. °C)	48/130

Typical Elastomer Properties

Hardness (A/D)	95/45
Modulus psi (MPa)	
100% Elongation	1,535 (10.6)
200% Elongation	1,695 (11.7)
300% Elongation	2,065 (14.2)
Tensile Strength psi (MPa)	8,285 (57.1)
Elongation (%)	566
Tear Resistance PLI (N/mm)	
Die C	785 (137)
Split	151 (26)
Trouser	350 (61)
Compressive Stress psi (MPa)	
5% Deflection	529 (3.6)
10% Deflection	837 (5.8)
15% Deflection	1,136 (7.8)
20% Deflection	1,496 (10.3)
25% Deflection	1,732 (11.9)
Compression Set (%), Method B:	
25% deflection, 22 hrs at 70 °C	23
Rebound (%)	43
NBS Abrasion Index	219



To Order or Obtain More Information

If you would like to place an order or receive additional information, please write or call Air Products at the following location.

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