

Polyurethane Specialty Products Group

AIRTHANE® PET-91A

TDI-Polyether Prepolymer

Prepolymer Properties

		Specifications	Typical
NCO (%)		4.1 - 4.5	4.3
Viscosity (cPs)	- 40 °C	-	3,200 - 3,700
	- 70 °C	≤ 1,300	800 - 1,000
Specific Gravity	- 70 °C	-	1.03
Residual TDI (%)		< 0.1	-

Processing and Elastomer Properties for Multiple Curatives

MBOCA Cured

Processing Conditions

MBOCA Level, 95% Stoichiometry (%)	12.2
Airthane Temperature (°C)	80
MOCA Temperature (°C)	120
Pot Life (Min.) - 75 °C	10
Mold Temperature (°C)	100
Demold Time (Min.)	30
Post Cure (Hrs./Temp. °C)	15/100

Typical Elastomer Properties

Hardness (A)	90 - 91
Modulus psi (MPa)	
100% Elongation	1,100 (7.6)
200% Elongation	1,400 (9.7)
300% Elongation	1,700 (11.7)
Tensile Strength psi (MPa)	4,800 (33.1)
Elongation (%)	490
Tear Resistance PLI (N/mm)	
Die C	400 (70)
Split	80 (14)
Compression Set (%), Method B:	
25% deflection, 22 hrs. at 70 °C	27
Rebound (%)	58
NBS Abrasion Index	162
Linear Shrinkage (%)	1.2
Specific Gravity	1.08

Ethacure® 300 Cured

Processing Conditions

Ethacure 300 Level, 95% Stoichiometry (%)	9.6
Airthane Temperature (°C)	80
Ethacure 300 Temperature (°C)	25
Pot Life (Min.) - 75 °C	9
Mold Temperature (°C)	100
Demold Time (Min.)	30
Post Cure (Hrs./Temp. °C)	15/100

Typical Elastomer Properties

Hardness (A)	88
Modulus psi (MPa)	
100% Elongation	1,000 (6.9)
200% Elongation	1,300 (9.0)
300% Elongation	1,700 (11.7)
Tensile Strength psi (MPa)	3,900 (26.9)
Elongation (%)	450
Tear Resistance PLI (N/mm)	
Die C	360 (63)
Split	50 (9)
Compression Set (%), Method B:	
25% deflection, 22 hrs. at 70 °C	29
Rebound (%)	63

Versalink® MCDEA Cured

Processing Conditions

Versalink MCDEA Level, 95% Stoichiometry (%)	17.1
Airthane Temperature (°C)	80
MCDEA Temperature (°C)	100
Pot Life (Min.) - 80 °C	4
Mold Temperature (°C)	130
Demold Time (Min.)	30
Post Cure (Hrs./Temp. °C)	48/130

Versalink[®] MCDEA Cured (continued)

Typical Elastomer Properties

Hardness (A/D)	92/42
Modulus psi (MPa)	
100% Elongation	1,270 (8.8)
200% Elongation	1,485 (10.2)
300% Elongation	1,870 (12.9)
Tensile Strength psi (MPa)	5,195 (35.8)
Elongation (%)	479
Tear Resistance PLI (N/mm)	
Die C	582 (102)
Split	57 (10)
Trouser	86 (15)
Compressive Stress psi (MPa)	
5% Deflection	369 (2.5)
10% Deflection	608 (4.2)
15% Deflection	838 (5.8)
20% Deflection	1,107 (7.6)
25% Deflection	1,462 (10.1)
Compression Set (%), Method B:	
25% deflection, 22 hrs. at 70 °C	20
Rebound (%)	57
NBS Abrasion Index	250

Trademarks and Suppliers

Ethacure Albemarle Corporation



*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.

Corporate Headquarters
Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501 USA

Tel: (800) 345-3107
Tel: (610) 481-7064
Fax: (610) 481-4184
www.airproducts.com/psp

The information contained herein is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto.

tell me more
www.airproducts.com