

# Adiprene® L 100

Polyurethane (Polyether, TDI)

Chemtura

## Message:

ADIPRENE L 100 urethane elastomer is one of a series of liquid urethane polymers which can be cured to a strong, rubbery solid by reaction of the isocyanate groups with polyamine compounds. When cured with MBCA<sup>1</sup> curing agent, ADIPRENE L 100 yields vulcanizates in the 88 to 92 Shore A hardness range. Lower hardness values and special properties can be obtained with other curing systems. Cured ADIPRENE L 100 has high tensile strength and resilience, as well as excellent resistance to abrasion, compression set, oils, solvents, oxidation, ozone, and low temperatures.

General Information			
Features	Good Abrasion Resistance		
	High Tensile Strength		
	Low Temperature Resistant		
	Oil Resistant		
	Oxidation Resistant		
	Ozone Resistant		
	Resilient		
	Solvent Resistant		
Uses	Coating Applications		
Forms	Liquid		
Processing Method	Casting		
	Spraying		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow	1.2	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	90		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% Strain	7.58	MPa	
300% Strain	14.5	MPa	
Tensile Strength	31.0	MPa	ASTM D412
Tensile Elongation (Break)	450	%	ASTM D412
Tear Strength			
-- <sup>1</sup>	70.1	kN/m	ASTM D624
Split	13	kN/m	ASTM D470
Compression Set (70°C, 22 hr)	27	%	ASTM D395B
Bayshore Resilience	45	%	ASTM D2632
Clash-Berg Modulus			ASTM D1043

-57°C	210	MPa	
-40°C	73.1	MPa	
-18°C	22.4	MPa	
24°C	17.9	MPa	
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -70.0	°C	ASTM D746
CLTE - Flow			ASTM D696
-36 to 0°C	2.6E-4	cm/cm/°C	
0 to 24°C	1.8E-4	cm/cm/°C	
24 to 100°C	1.7E-4	cm/cm/°C	
100 to 150°C	1.6E-4	cm/cm/°C	
Thermal Conductivity	0.13	W/m/K	ASTM C177
Thermoset	Nominal Value	Unit	
Thermoset Components			
Hardener	Mix Ratio by Weight: 12		
Resin	Mix Ratio by Weight: 100		
Pot Life (100°C)	10	min	
Demold Time (100°C)	30 to 45	min	
Post Cure Time (70°C)	16	hr	
Additional Information	Nominal Value	Unit	
Abrasion Index - NBS	175		
Uncured Properties	Nominal Value	Unit	
Curing Time (100°C)	1.0	hr	
NOTE			
1.	Die C		

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