Adiprene® L 315

Polyurethane (Polyether, TDI)

Chemtura

Message:

ADIPRENE® L 315 is a liquid urethane polymer which can be cured to a strong, rubbery solid by reaction of its terminal isocyanate groups with polyamine or polyol compounds. When cured with MBCA I, ADIPRENE L 315 yields hard tough products that approach the strength of structural plastics in many properties. Vulcanizates of ADIPRENE L 315 effectively fill the gap between elastomers and plastics, combining high impact strength and resistance to abrasion and deformation with resilience and extensibility. These vulcanizates are resistant to the deteriorating effects of heat, water, oxygen, ozone, oils and most solvents.

ADIPRENE L 315 is a fully saturated polymer having an available isocyanate content of about 9.5% and a Brookfield viscosity of about 14 500 cP (14.5 Pa-s) at 86°F (30°C). Compounding and processing techniques used with other polymers of the ADIPRENE L family are generally applicable to ADIPRENE L 315, although allowance must be made for its high reactivity.

The vulcanizate properties of ADIPRENE L 315 suggest its use in wheels, rolls, heel lifts, bearings, metal forming tools, sporting goods, ball joint liners, and in other applications where plastics or metals are now being used.

General Information			
Features	Good Abrasion Resistance		
	Good Toughness		
	High Hardness		
	High Impact Resistance		
	Medium Heat Resistance		
	Moisture Resistant		
	Oil Resistant		
	Oxidation Resistant		
	Ozone Resistant		
	Resilient		
	Solvent Resistant		
Uses	Bearings		
	Metal Replacement		
	Sporting Goods		
	Wheels		
Forms	Liquid		
Hardness	Nominal Value		Test Method
Durometer Hardness (Shore D)	73		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	627	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	32.1	MPa	ASTM D412
Tensile Strength	62.1	MPa	ASTM D412
Tensile Elongation (Break)	210	%	ASTM D412
Tear Strength (Split)	19	kN/m	ASTM D470

Compression Set			ASTM D395A
70°C, 22 hr	10	%	
100°C, 22 hr	12	%	
Bayshore Resilience	45	%	ASTM D2632
Clash-Berg Modulus			ASTM D1043
-57°C	565	MPa	
-40°C	386	MPa	
-18°C	207	MPa	
24°C	96.5	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	640	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45			
MPa, Unannealed)	185	°C	ASTM D648
Brittleness Temperature	-64.0	°C	ASTM D746
Thermoset	Nominal Value	Unit	
Thermoset Components			
Hardener	Mix Ratio by Weight: 27		
Resin	Mix Ratio by Weight: 100		
Pot Life	1.0	min	
Demold Time	5.0 to 15	min	
Post Cure Time (100°C)	1.0	hr	
Additional Information	Nominal Value	Unit	
Abrasion Index - NBS	450		
Uncured Properties	Nominal Value	Unit	
Curing Time (100°C)	1.0	hr	

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