Adiprene® L 83

Polyurethane (Polyether, TDI)

Chemtura

Message:

ADIPRENE L 83 urethane rubber is one of a series of polyether-based liquid urethane prepolymers which can be cured to a strong, rubbery solid by the reaction of the isocyanate groups with polyamine compounds. When cured with MBCA 1 urethane curative, ADIPRENE L 83 yields vulcanizates in the 80-85 durometer A hardness range. ADIPRENE L 83 can be cast, compression molded, sprayed or spread to produce a wide variety of mechanical goods and protective and decorative coatings.
Vulcanizates of ADIPRENE L 83 provide a unique combination of properties including excellent abrasion resistance, resilience, hydrolytic stability and overall mechanical properties-which make it especially suitable for handling abrasive slurries from mine and mill operations. Vulcanizates of ADIPRENE L 83 cured with MBCA have been used successfuly in the mining industry to line slurry pumps, agitators, flotation rotors and stators, cyclone separator systems, piping, valves and screens, and in the recreational market for roller skate and skateboard wheels.

General Information	
Features	Good Abrasion Resistance
	Good Processability
	Hydrolytically Stable
	Resilient
Uses	Coating Applications
	Mining Applications
	Sporting Goods
	Wheels
Forms	Liquid
Processing Method	Casting
	Compression Molding
	Spraying

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	g/cm³	ASTM D792
Molding Shrinkage - Flow	1.5	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	83		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			ASTM D797
-46°C	72.4	MPa	
-40°C	44.8	MPa	
24°C	33.8	MPa	
Compressive Strength			ASTM D695
5% Strain	1.38	MPa	
10% Strain	2.24	MPa	

15% Strain	3.28	MPa	
20% Strain	4.48	MPa	
25% Strain	6.21	MPa	
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ASTM D412
100% Strain	4.83	MPa	
300% Strain	8.27	MPa	
Tensile Strength	30.3	MPa	ASTM D412
Tensile Elongation (Break)	580	%	ASTM D412
Tear Strength			
-- [1]	70.1	kN/m	ASTM D624
Split	15	kN/m	ASTM D470
Compression Set (70°C, 22 hr)	35	%	ASTM D395B
Bayshore Resilience	50	%	ASTM D2632
Clash-Berg Modulus			ASTM D1043
-57°C	96.5	MPa	
-40°C	25.5	MPa	
-18°C	13.8	MPa	
24°C	11.0	MPa	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	< -70.0	°C	ASTM D746
Thermoset	**Nominal Value**	**Unit**	
Thermoset Components			
Hardener	Mix Ratio by Weight: 10		
Resin	Mix Ratio by Weight: 100		
Pot Life	5.0	min	
Post Cure Time (70°C)	16	hr	
Additional Information	**Nominal Value**	**Unit**	
Abrasion Index - NBS	200		
Uncured Properties	**Nominal Value**	**Unit**	
Curing Time (100°C)	1.0	hr	
NOTE			
1.	Die C		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China