
O-Ring Compound U90 Data Sheet

Polyurethane Rubber
90 Durometer, Transparent

General Information:

Polyurethane has excellent wear resistance, high tensile strength and high elasticity in comparison with any other elastomers. We can also offer any type thermoplastic urethane (TPU).

Cure System: Peroxide-cured

Temperature Range: -40°C (-40°F) to 80°C (176°F)

Attributes:

- Color: Transparent
- 90±5 Shore A Hardness
- Shelf-life: Unlimited

Performs Well In:

- Aliphatic hydrocarbon
- Mineral oil and grease
- Silicone oil and grease
- Ozone
- Water up to 50°C (122°F) EU type

Doesn't Perform Well In:

- Ketones
- Alcohols
- Esters
- Ethers
- Hot water and steam
- Alkalis, amines
- Acids
- Glycols

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TEST REPORT FOR O-RING COMPOUND U90

MATERIAL: POLYURETHANE RUBBER

DUROMETER: 90

COLOR: TRANSPARENT

ASTM* D2000 M3BG910 A14 B14 EA14 EO14 Z1 Z2 Z3

SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
	ORIGINAL PHYSICAL PROPERTIES			
	Hardness, Shore A	90±5	91	D2240-04
	Tensile Strength, psi (MPa)	1450 (min.)	2847 (19.63)	D412-98a
	Elongation, percent	100 (min.)	180	D412-98a
	Modulus at 100%, psi (MPa)		1659 (11.44)	D412-98a
	Specific Gravity (g/cm ³)		1.231	
A14	HEAT AGE			D573-04
	70 hours at 100°C (212°F)			
	Hardness Change, points	±15	0	
	Tensile Strength Change, percent	-20 (max.)	-15	
	Elongation Change, percent	-40 (max.)	-18	
	Weight Change, percent		+0.1	
B14	COMPRESSION SET			D395-03, Method B
	22 hours at 100°C (212°F), percent	50 (button) (max.)	29.5	
EA14	WATER RESISTANCE			D471-98
	70 hours at 100°C (212°F)			
	Hardness Change, points	±10	-1	
	Tensile Strength Change, percent		-1	
	Elongation Change, percent		+8	
	Volume Change, percent	±15	+3.9	
EO14	NO. 1 OIL RESISTANCE			D471-98
	70 hours at 100°C (212°F)			
	Hardness Change, points	-7 to +5	-2	
	Tensile Strength Change, percent	-20 (max.)	-17	
	Elongation Change, percent	-40 (max.)	-16	
	Volume Change, percent	-5 to +10	+4.8	
Z3	TENSILE SET, PERCENT			
	Hold 100% Elongation for 2 minutes,			
	Release tension and rest 2 minutes		10.2	

*American Society for Testing and Materials

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