
O-Ring Compound A80 Data Sheet

Material: Tetrafluoroethylene-Propylene (AFLAS)
80 Durometer, Black

General Information:

This elastomer is a copolymer of tetrafluoroethylene (TFE) and propylene. AFLAS is unique due to its resistance to petroleum products, steam, phosphate esters and brake fluids. In some respects, it exhibits media compatibility properties similar to ethylene propylene and fluorocarbon. It has fair resistance to brake fluids and phosphate esters while exhibiting good resistance to petroleum oils.

Cure System: *Peroxide-cured*

Temperature Range: -10°C (14°F) to 220°C (428°F)

Attributes:

- Color: Black
- 80±5 Shore A durometer
- Shelf-life: Unlimited

Performs Well In:


- Petroleum fluids
- Brake fluids
- Bases
- Phosphate esters
- Amines
- Engine oils
- Steam and hot water
- Pulp and paper liquids

Doesn't Perform Well In:


- Aromatic fuels
- Ketones
- Chlorinated hydrocarbons

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	TEST REPORT FOR COMPOUND A80 MATERIAL: AFLAS - ASAHI 100S POLYMER DUROMETER: 80 COLOR: BLACK ASTM D2000 M2HK810 B37			
SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
	ORIGINAL PHYSICAL PROPERTIES			
	Hardness, Shore A	80±5	82	
	Tensile Strength, min, Mpa	1450	2918	
	Elongation, min, percent	150	220	
	Tear Resistance, Kg/cm (Die C)		34	
	Modulus, 100%, psi		1329	
	Modulus, 200%, psi		2826	
	Specific Gravity		1.647	
A	HEAT RESISTANCE			D573
	70 hours at 250°C			
	Hardness Change, points		-1	
	Tensile Strength Change, percent		-19	
	Elongation Change, percent		+6	
	Volume Change, percent		-3.6	
	HEAT RESISTANCE			D573
	70 hours at 275°C			
	Hardness Change, points		-1	
	Tensile Strength Change, percent		-52	
	Elongation Change, percent		-10	
	Volume Change, percent		-7.5	
B37	COMPRESSION SET			D395
	22 hours at 175°C			
	max, %,	50	44	
B	COMPRESSION SET			D395 (Slab)
	22 hours at 200°C			
	%,		52	
	OIL RESISTANCE, ASTM#IRM901			D471
	70 hours at 150°C			
	Hardness Change, points		-3	
	Tensile Strength Change, percent		+7	
	Elongation Change, percent		+5	
	Volume Change, percent		+2.4	
	OIL RESISTANCE, ASTM#IRM903			D471
	70 hours at 150°C			
	Hardness Change, points		-11	
	Tensile Strength Change, percent		-10	
	Elongation Change, percent		-2	
	Volume Change, percent		+13.6	

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	TEST REPORT FOR COMPOUND A80 MATERIAL: AFLAS - ASAHI 100S POLYMER DUROMETER: 80 COLOR: BLACK ASTM D2000 M2HK810 B37			
	SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS
		OIL RESISTANCE, HATCO 7700		
		70 hours at 200°C		
		Hardness Change, points		-23
		Tensile Strength Change, percent		-27
		Elongation Change, percent		0
		Volume Change, percent		+27.2
		FUEL A RESISTANCE		
		70 hours at 23°C		
		Hardness Change, points		-30
		Tensile Strength Change, percent		-48
		Elongation Change, percent		-26
		Volume Change, percent		+36.4
		FUEL B RESISTANCE		
		70 hours at 23°C		
		Hardness Change, points		-40
		Tensile Strength Change, percent		-68
		Elongation Change, percent		-50
		Volume Change, percent		+71.4
		OIL RESISTANCE, SERVICE LIQUID #101		
		70 hours at 200°C		
		Hardness Change, points		-24
		Tensile Strength Change, percent		-31
		Elongation Change, percent		+1
		Volume Change, percent		+26.6

*American Society for Testing and Materials