



SPEC SEALS TECHNICAL REPORT HNBR70B BLACK COLOR HYDROGENATED NITRILE COMPOUND

GENERAL PROPERTIES

SPEC SEALS HNBR (Sometimes referred to as Highly Saturated Nitrile - HSN) offers a broad temperature range from -25F to +350F. HNBR is often used in automotive refrigeration systems using Freon 134A and in power steering seals using Type A Fluid. While HNBR is in the Nitrile family, it undergoes an expensive process to become HNBR. Nitrile is first dissolved in a solvent. A palladium catalyst is used and hydrogen gas hydrogenates the Nitrile.

		SPEC SEALS HNBR70B	
<u>ASTM Designation</u>	<u>ORIGINAL PROPERTIES</u>	<u>ASTM D2000 SPECIFICATION</u>	<u>LABORATORY PROPERTIES</u>
	Durometer, Shore A	70 +/- 5	72
	Tensile, psi (MPa), Minimum	2320 (16)	3805 (26.2)
	Elongation, % Minimum	250	303
	Specific Gravity	-	1.184
A26	<u>HEAT AGE, 70 HRS @ 150C</u>		
	Durometer Change, Points	+10	+9
	Tensile Strength Change, % Maximum	-15	-2
	Elongation Change, % Maximum	-25	-17
B16	<u>COMPRESSION SET, 22 HRS @ 150C</u>		
	Original Deflection, % Maximum	30 (Button)	15.7
E016	<u>ASTM #1 OIL, 70 HRS @ 150 C</u>		
	Durometer Change, Points	-5/+10	+1
	Tensile Change, % Maximum	-20	+16
	Elongation Change, % Maximum	-30	+1
	Volume Change, %	-10/+5	-3
E036	<u>ASTM #3 (IRM 903)OIL, 70 HRS @ 150C</u>		
	Durometer Change, Points	-15	-6
	Tensile Change, % Maximum	-40	-11
	Elongation Change, % Maximum	-30	-13
	Volume Change, % Maximum	+25	+12.2
F17	<u>LOW TEMPERATURE BRITTLENESS</u>		
	Non-Brittle after 3 minutes @ -40C	Pass	Pass

SPECIFICATIONS MET

ASTM D2000-01 Grade M4DH716 A26 B16 E016 E036 F17 Z1=Black Color