

Ascend Sealing Technology Compound: H10170GR

Ascend Sealing has developed Hydrogenated Nitrile rubber (HNBR) to be the most cost-effective compound, without sacrificing performance for general usage. HNBR is one of the most popular material for sealing application. We specially formulated H10170GR for good resistance to common lubricants and oils with ideal mechanical properties. As for general purpose, H10170GR is a sulfur-cured compound with good balance between physical and chemical resistance.

Service Temperature: -31°F to 302°F (-35°C to 150°C)

Ascend Sealing provides a wide range of HNBRs. For additional technical support, please contact us at customer_service@ascendsealing.com.

Compatible

- Vegetable oils
- Water and steam to 150°C (302°F)
- Petroleum based oils and fuels
- Silicone oils and greases
- Ethylene glycol
- Dilute acids, bases and salt solutions to moderate temperatures
- Aliphatic hydrocarbons

Incompatible

- Esters
- Strong acids
- Ketones
- Ethers
- Chlorinated hydrocarbons

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Physical Properties

MATERIAL :	HNBR
COMPOUND :	H10170GR
SPEC. :	ASTM D2000 M4DH716 A26 B36 EO16 EO36 F17 Z1
COLOR :	GREEN

	<u>Original Physical Properties</u>	<u>Requirements</u>	<u>Results</u>
	Hardness, (Shore A) (ASTM D2240-05)	70±5	74
	Tensile Strength, psi (MPa) (ASTM D412-06a)	2321(min)	2985(20.59)
	Elongation, (%) (ASTM D412-06a)	250(min)	328
	Modulus at 100%, psi(MPa) (ASTM D412-06a)		866(5.97)
	Specific Gravity, (g/cm ³)		1.36
<u>A26</u>	<u>Heat Age, 70 Hrs @ 150 °C (ASTM D865-99)</u>		
	Hardness Change, pts.	+10(max)	+3
	Tensile Strength Change, %	-15(max)	+3
	Elongation Change, %	-25(max)	-3
	Weight Change, %		-0.1
<u>B36</u>	<u>Compression Set, 22 Hrs @ 150 °C (ASTM D395-14,Method B)</u>	35%(plied)(max)	18.0
<u>EO16</u>	<u>IRM 901 Oil, 70 Hrs @ 150 °C (ASTM D471-12a)</u>		
	Hardness Change, pts.	-5~+10	+1
	Tensile Strength Change, %	-20(max)	+5
	Elongation Change, %	-40(max)	-6
	Volume Change, %	-10~+5	-1.9
<u>EO36</u>	<u>IRM 903 Oil, 70 Hrs @ 150 °C (ASTM D471-12a)</u>		
	Hardness Change, pts.	-15(max)	-6
	Tensile Strength Change, %	-40(max)	-4
	Elongation Change, %	-30(max)	-10
	Volume Change, %	+25(max)	+12.4
<u>F17</u>	<u>Low-Temperature Brittleness Point Test, 3 minute @ -40 °C (ASTM D2137-11, Method A)</u>		
	Sample type: T-50,		
	Coolant : Isopropyl alcohol,		
	Brittleness temperature to nearest 1°C,	no crack	pass
<u>Z2</u>	<u>Low Temperature Retraction Test (TR Test) (ASTM D1329-02)</u>		

Testing Elongation 50%
The Equipment of measure temperature: thermocouple
Length of Sample: 51 mm
Rate of Temperature increasing: 1°C/min
Test Temperature: 26 °C
Coolant :
Methanol

TR10, °C

-24.4

Statement and recommendation provided in this data sheet correspond to Ascend Sealing Technology's best knowledge on the subject at the date of its publication. The user should conduct their own analysis and testing and is solely responsible for making the final selection of the system and component. Since Ascend Sealing Technology cannot anticipate all the application parameters in actual conditions, we do not guarantee the results and assume no liability in connection with any use of this information.

