Hydrogenated Nitrile Rubber Compound

HNBRXX Series

Technical Data Sheet
LX0610-2023-01 V2

Description: HNBR hydrogenated nitrile rubber compound is a semi-finished product of hydrogenated nitrile rubber, which is processed by internal mixer or open mill through reinforcing and filling, adding various processing AIDS, vulcanization active agents and other raw materials. The formula design is customized for the product factory according to different technical requirements. Hydrogenated nitrile rubber is made from Nitrile rubber.The product obtained by hydrogenating and saturating the carbon-carbon double bond in the middle molecular chain is also called highly saturated nitrile rubber. Through vulcanization and crosslinking, obtained with excellent heat resistance, ozone resistance, oil resistance, chemical reagent resistance .

Application: HNBR hydrogenated nitrile rubber compound is widely used in automobile manufacturing, oil field exploitation, air conditioning, printing and other industries after processing and molding. Sulfur vulcanization system is used for dynamic properties and bonding properties of steel and fiber composites. Peroxide curing systems can be used to improve heat resistance and compression set properties.

Special properties:

- Rapid calendering and extrusion and smooth surface
- The storage stability is good
- And that tear performance is excellent
- Low voltage transformer
- Excellent ozone & weather resistance
- Excellent grease and solvent resistance
- Excellent heat resistance
- Excellent low temperature performance
- Excellent antistatic property
- Excellent medium and high wear resistance
- Excellent mechanical properties, high strength

Curing Condition:

1) bis-25 (2,5-dimethyl-2,5-di (t-butylperoxy) hexane) peroxide was added together with a mixture of co- crosslinking agent was vulcanized at 175 ℃@8 min.
2) carrying out secondary vulcanization at 150℃@ 4 hours.

Mechanical properties

Product name		HNBR45	HNBR55	HNBR65	HNBR75	HNBR85
Mooney viscosity (ML 1 + 4 @ 100 ℃)		40	48	56	67	72
Rheometer 180℃×5min	Minimum torque ML, lb-in	0.14	0.28	0.52	0.58	1.4
	Maximum torque MH, lb-in	6.29	10.10	11.28	14.76	19.44
	Scorch time TS2, sec	55	77	52	70	52
	Cure time TC 90, sec	126	242	272	317	337
Conventional physical properties Section I 175 ℃ × 8 min	Specific gravity, G/cm3	1.216	1.101	1.195	1.221	1.246
	Hardness (Shore A), points	50	57	64	73	84
	Tensile strength, MPa	10.79	13.32	17.01	18.67	20.16

Two-stage 150 ℃ × 4h		Elongation at break,%	520	379	365	336	211
		M100，MPa	1.83	2.12	3.55	4.23	10.43
Hot air aging 150℃×70h		Hardness (ShoreA) change, points	+5	+4	+3	+1	+1
		Change in breaking strength,%	-9.98	-8.76	-6.78	-5.6	-3.6
		Change in elongation at break,%	-19.48	-18.73	-15.89	-6.9	-8.89
Oil resistance 100℃×70h	IRM901#	Hardness (ShoreA) change, points	+9	+7	+4	+4	+1
		Change in breaking strength,%	-4.78	-3.78	-2.67	-1.98	-0.93
		Change in elongation at break,%	-11.97	-10.39	-8.89	-17	-14.23
		Change in volume change rate,%	-9.98	-9.75	-5.34	-5.70	-3.87
	IRM903#	Hardness (Shore A), points	40	53	62	72	83
		Tensile strength, MPa	9.79	18.78	16.87	18.34	20.08
		Elongation at break,%	501	390	334	289	206
		Volume change rate,%	+10.44	+6.01	+2.34	+1.10	+0.38
	Fuel C	Change in volume change rate,%	+38.55	+35.22	+32.74	+28.66	+25.76
Compression set 100 ℃ × 70h,%			32.82	29.72	27.45	26.13	20.69
Ozone resistance, 80pphm × 20% elongation × 40 ℃ × 120h			No cracking	No cracking	No cracking	No cracking	No cracking
Low temperature retractability, ℃			-38	-34	-32	-28	-22

Packaging：20 kg per cardboard boxes.

Storage and shelf life:

This series may be stored in its original unopened packaging at a temperature below 40°C for up to 12 months as from the date of manufacture.

For More Product Information, Please Visit Our Website: **www.sanezen.com**

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