

NANCAR® 1051

Acrylonitrile Butadiene Rubber

Nantex Industry Co., Ltd.

Message:

NANCAR® 1051 is a high acrylonitrile butadiene copolymer with excellent oil resistance. It is polymerized at low temperature and contains sufficient antioxidant for normal aging conditions. It has good processing characteristics in compounds where flow and knitting are desired and is especially valuable in high durometer compounds.

NANCAR® 1051 provides good processing and building tack. It is suggested for use in molded goods, friction stock and similar applications.

General Information			
Additive	Antioxidant		
Features	Antioxidant		
	Copolymer		
	Good Flow		
	Good Processability		
	Oil Resistant		
Uses	Molds/Dies/Tools		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.00	g/cm ³	
Mooney Viscosity			ASTM D1646
ML 1+4, 100°C ¹	11	MU	
ML 1+4, 100°C	68	MU	
Acrylonitrile Content - Bound	41.0	%	Internal Method
Solubility - in MEK	100	%	
Stabilizer	Non-staining		
Viscosity			ASTM D1646
Minimum	63.0		
Minutes to 35 points rise, t35	38.6	min	
Minutes to 5 points rise, t5	35.1	min	
Heat Loss	0.40	%	ASTM D5688
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 5 sec ²	74		
Shore A, 5 sec ³	72		
Shore A, 5 sec ⁴	70		
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
300% Strain ⁵	15.3	MPa	
300% Strain ⁶	13.9	MPa	

300% Strain ⁷	12.6	MPa	
Tensile Strength			ASTM D412
Yield ⁸	28.2	MPa	
Yield ⁹	27.9	MPa	
Yield ¹⁰	27.5	MPa	
Tensile Elongation			ASTM D412
Break ¹¹	510	%	
Break ¹²	530	%	
Break ¹³	580	%	
Tear Strength	58.0	kN/m	ASTM D624
Compression Set ¹⁴ (100°C, 70 hr)	54	%	ASTM D395
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air ¹⁵ (100°C, 70 hr)	-7.0	%	ASTM D573
Change in Ultimate Elongation in Air ¹⁶ (100°C, 70 hr)	-20	%	ASTM D573
Change in Durometer Hardness in Air ¹⁷ (Shore A, 100°C, 70 hr)	4.0		ASTM D573
Change in Tensile Strength ¹⁸			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-3.0	%	
100°C, 70 hr, in IRM 903 Oil	-8.0	%	
Change in Ultimate Elongation ¹⁹			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-24	%	
100°C, 70 hr, in IRM 903 Oil	-14	%	
Change in Durometer Hardness ²⁰			ASTM D471
Shore A, 100°C, 70 hr, in ASTM #1 Oil	2.0		
Shore A, 100°C, 70 hr, in IRM 903 Oil	-6.0		
Change in Volume ²¹			ASTM D471
100°C, 70 hr, in ASTM Oil #1	-1.1	%	
100°C, 70 hr, in IRM 903 Oil	9.4	%	
NOTE			
1.	Uncured		
2.	CURED @150°C for 60 mins		
3.	CURED @150°C for 40 mins		
4.	CURED @150°C for 20 mins		
5.	CURED @150°C for 60 mins		
6.	CURED @150°C for 40 mins		
7.	CURED @150°C for 20 mins		
8.	CURED @150°C for 60 mins		
9.	CURED @150°C for 40 mins		
10.	CURED @150°C for 20 mins		
11.	CURED @150°C for 60 mins		
12.	CURED @150°C for 40 mins		

13.	CURED @150°C for 20 mins
14.	CURED @150°C for 60 mins
15.	CURED@150°C × 40 MINUTES
16.	CURED@150°C × 40 MINUTES
17.	CURED@150°C × 40 MINUTES
18.	CURED@150°C × 40 MINUTES
19.	CURED@150°C × 40 MINUTES
20.	CURED@150°C × 40 MINUTES
21.	CURED@150°C × 40 MINUTES

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