

NANCAR® 1043

Acrylonitrile Butadiene Rubber

Nantex Industry Co., Ltd.

Message:

NANCAR® 1043 is a medium acrylonitrile butadiene copolymer with medium oil resistance. It is polymerized at low temperature and contains sufficient antioxidant for normal aging conditions. It has high Mooney viscosity and provides compounds with higher strength and modulus.

NANCAR® 1043 is recommended for use in applications requiring improved low temperature properties. NANCAR® 1043 provides excellent extrusion and general processing improvement.

General Information			
Additive	Antioxidant		
Features	Antioxidant		
	Copolymer		
	Good Processability		
	High Strength		
	Oil Resistant		
Uses	Low Temperature Applications		
Forms	Pellets		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.970	g/cm ³	
Mooney Viscosity (ML 1+4, 100°C)	83	MU	ASTM D1646
Acrylonitrile Content - Bound	33.0	%	Internal Method
Solubility - in MEK	100	%	
Stabilizer	Slightly-staining		
Heat Loss	0.40	%	ASTM D5688
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A ¹	69		
Shore A ²	68		
Shore A ³	67		
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
300% Strain ⁴	10.9	MPa	
300% Strain ⁵	11.5	MPa	
300% Strain ⁶	12.7	MPa	
Tensile Strength			ASTM D412
Yield ⁷	24.6	MPa	
Yield ⁸	23.9	MPa	
Yield ⁹	23.4	MPa	

Tensile Elongation			ASTM D412
Break ¹⁰	550	%	
Break ¹¹	520	%	
Break ¹²	500	%	
Tear Strength	50.0	kN/m	ASTM D624
Compression Set ¹³ (100°C, 70 hr)	55	%	ASTM D395
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air ¹⁴ (100°C, 70 hr)	-4.0	%	ASTM D865
Change in Ultimate Elongation in Air ¹⁵ (100°C, 70 hr)	-25	%	ASTM D865
Change in Durometer Hardness in Air ¹⁶ (Shore A, 100°C, 70 hr)	5.0		ASTM D865
Change in Tensile Strength ¹⁷			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-5.0	%	
100°C, 70 hr, in ASTM #3 Oil	-21	%	
Change in Ultimate Elongation ¹⁸			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-22	%	
100°C, 70 hr, in ASTM #3 Oil	-21	%	
Change in Durometer Hardness ¹⁹			ASTM D471
Shore A, 100°C, 70 hr, in ASTM #1 Oil	1.0		
Shore A, 100°C, 70 hr, in ASTM #3 Oil	-12		
Change in Volume ²⁰			ASTM D471
100°C, 70 hr, in ASTM Oil #1	1.0	%	
100°C, 70 hr, in ASTM Oil #3	22	%	
NOTE			
1.	Cured for 60.0 min at 150°C		
2.	Cured for 40.0 min at 150°C		
3.	Cured for 20.0 min at 150°C		
4.	Cured for 20.0 min at 150°C		
5.	Cured for 40.0 min at 150°C		
6.	Cured for 60.0 min at 150°C		
7.	Cured for 60.0 min at 150°C		
8.	Cured for 40.0 min at 150°C		
9.	Cured for 20.0 min at 150°C		
10.	Cured for 20.0 min at 150°C		
11.	Cured for 40.0 min at 150°C		
12.	Cured for 60.0 min at 150°C		
13.	Cured for 60.0 min at 150°C		
14.	Cured for 40.0 min at 150°C		
15.	Cured for 40.0 min at 150°C		
16.	Cured for 40.0 min at 150°C		
17.	Cured for 40.0 min at 150°C		

18.	Cured for 40.0 min at 150°C
19.	Cured for 40.0 min at 150°C
20.	Cured for 40.0 min at 150°C

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