

NANCAR® 1042

Acrylonitrile Butadiene Rubber
Nantex Industry Co., Ltd.

Message:

NANCAR® 1042 is a medium high acrylonitrile butadiene copolymer with good 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® 1042 is a general purpose and easy processing nitrile elastomer. It has excellent solubility, milled and unmilled. It is recommended for use in seals, hoses, belts, sheetings, print rolls, gaskets, kitchen mats, shoe soles.

General Information			
Additive	Antioxidant		
Features	Antioxidant		
	Copolymer		
	High Strength		
	Oil Resistant		
Uses	Belts/Belt Repair		
	Footwear		
	Gaskets		
	General Purpose		
	Hose		
	Rubber Replacement		
	Seals		
	Sheet		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.980	g/cm ³	
Mooney Viscosity (ML 1+4, 100°C)	79	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	72		
Shore A ²	71		
Shore A ³	70		
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
300% Strain ⁴	12.4	MPa	

300% Strain ⁵	13.3	MPa	
300% Strain ⁶	14.5	MPa	
Tensile Strength			ASTM D412
Yield ⁷	26.3	MPa	
Yield ⁸	26.9	MPa	
Yield ⁹	25.8	MPa	
Tensile Elongation			ASTM D412
Break ¹⁰	530	%	
Break ¹¹	510	%	
Break ¹²	490	%	
Tear Strength	58.8	kN/m	ASTM D624
Compression Set ¹³ (100°C, 70 hr)	58	%	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)	-22	%	ASTM D865
Change in Durometer Hardness in Air ¹⁶ (Shore A, 100°C, 70 hr)	3.0		ASTM D865
Change in Tensile Strength ¹⁷			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-1.0	%	
100°C, 70 hr, in ASTM #3 Oil	-10	%	
Change in Ultimate Elongation ¹⁸			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-14	%	
100°C, 70 hr, in ASTM #3 Oil	-14	%	
Change in Durometer Hardness ¹⁹			ASTM D471
Shore A, 100°C, 70 hr, in ASTM #1 Oil	-2.0		
Shore A, 100°C, 70 hr, in ASTM #3 Oil	-13		
Change in Volume ²⁰			ASTM D471
100°C, 70 hr, in ASTM Oil #1	0.0	%	
100°C, 70 hr, in ASTM Oil #3	18	%	
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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