

NANCAR® 3655

Acrylonitrile Butadiene Rubber

Nantex Industry Co., Ltd.

Message:

NANCAR® 3655 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 superior processing characteristics, fast curing rate, low mold fouling and superior resilience properties. NANCAR® 3655 is an excellent multi-purpose nitrile elastomer. It may be blended with vinyl resins to produce smooth extrusions and nerve-free sheets. Suggested applications include those in fuel hoses, packings, gaskets, oil seals, other car parts, oil resistant belts, footwear and roll covers.

General Information			
Additive	Antioxidant		
Features	Antioxidant		
	Copolymer		
	Fast Cure		
	Good Moldability		
	Good Processability		
	Oil Resistant		
	Resilient		
Uses	Belts/Belt Repair		
	Blending		
	Footwear		
	Gaskets		
	Hose		
	Seals		
	Sheet		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.980	g/cm ³	
Mooney Viscosity			ASTM D1646
ML 1+4, 100°C ¹	80	MU	
ML 1+4, 100°C	54	MU	
Acrylonitrile Content - Bound	36.0	%	Internal Method
Solubility - in MEK	100	%	
Stabilizer	Non-staining		
Heat Loss	0.30	%	ASTM D5688
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			
Shore A, 5 sec ²	73		ASTM D2240
Shore A, 5 sec ³	72		ASTM D2240

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
300% Strain ⁴	12.3	MPa	
300% Strain ⁵	11.2	MPa	
300% Strain ⁶	10.0	MPa	
Tensile Strength			ASTM D412
Yield ⁷	25.4	MPa	
Yield ⁸	25.7	MPa	
Yield ⁹	26.1	MPa	
Tensile Elongation			ASTM D412
Break ¹⁰	530	%	
Break ¹¹	560	%	
Break ¹²	610	%	
Tear Strength	61.0	kN/m	ASTM D624
Compression Set ¹³ (100°C, 70 hr)	67	%	ASTM D395
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air ¹⁴ (100°C, 70 hr)	-2.0	%	ASTM D573
Change in Ultimate Elongation in Air ¹⁵ (100°C, 70 hr)	-30	%	ASTM D573
Change in Durometer Hardness in Air ¹⁶ (Shore A, 100°C, 70 hr)	3.0		ASTM D573
Change in Tensile Strength ¹⁷			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-3.0	%	
100°C, 70 hr, in IRM 903 Oil	-25	%	
Change in Ultimate Elongation ¹⁸			ASTM D471
100°C, 70 hr, in ASTM #1 Oil	-23	%	
100°C, 70 hr, in IRM 903 Oil	-27	%	
Change in Durometer Hardness ¹⁹			ASTM D471
Shore A, 100°C, 70 hr, in ASTM #1 Oil	3.0		
Shore A, 100°C, 70 hr, in IRM 903 Oil	-6.0		
Change in Volume ²⁰			ASTM D471
100°C, 70 hr, in ASTM Oil #1	0.30	%	
100°C, 70 hr, in IRM 903 Oil	11	%	
NOTE			
1.	Uncured		
2.	CURED @150°C for 60 mins		
3.	CURED @150°C for 20 mins		
4.	CURED @150°C for 60 mins		
5.	CURED @150°C for 40 mins		
6.	CURED @150°C for 20 mins		
7.	CURED @150°C for 60 mins		
8.	CURED @150°C for 40 mins		

9.	CURED @150°C for 20 mins
10.	CURED @150°C for 60 mins
11.	CURED @150°C for 40 mins
12.	CURED @150°C for 20 mins
13.	CURED @150°C for 60 mins
14.	CURED@150°C × 40 MINUTES
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

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