

LG Chemical NBR 6230 High Acrylonitrile Polymer

Category : Polymer , Thermoset , Rubber or Thermoset Elastomer (TSE)

Material Notes:

Description: NBR 6230 is a copolymer of butadiene and acrylonitrile manufactured by advanced emulsion polymerization technology of Goodyear and LG Chem. NBR 6230 is a non staining, low mooney, and medium high acrylonitrile polymer designed to aid in processing operations such as extruding and calendaring. NBR6230 is a low temperature polymerized polymer, and such as, retains the excellent processing and the good physical properties of a cold nitrile rubber. NBR 6230 is a low mooney version of NBR 6240. Applications: NBR 6230 is recommended to use in packings, shoe products, chemically blown sponge, oil field products, industrial and automotive molded parts. .CAS No: 9003-18-3 Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-NBR-6230-High-Acrylonitrile-Polymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.990 g/cc	0.990 g/cc	
Volatiles	0.30 %	0.30 %	
Mooney Viscosity	34 @Temperature 100 Â°C	34 @Temperature 212 Â°F	ML 1+4
Ash	<= 0.50 %	<= 0.50 %	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	68 @Temperature 145 Â°C, Time 1190 sec	68 @Temperature 293 Â°F, Time 0.330 hour	Cured
	71 @Temperature 100 Â°C, Time 259000 sec	71 @Temperature 212 Â°F, Time 72.0 hour	Circulating Oven Aging
	45 @Treatment Temp. 25.0 Â°C, Time 259000 sec	45 @Treatment Temp. 77.0 Â°F, Time 72.0 hour	Aged fuel C
	68 @Treatment Temp. 100 Â°C, Time 259000 sec	68 @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #3 Oil
	71 @Treatment Temp. 100 Â°C, Time 259000 sec	71 @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #1 Oil

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	@Temperature 145 Â°C, Time 1190 sec	@Temperature 293 Â°F, Time 0.330 hour	Cured
	18.3 MPa	2650 psi	Circulating Oven Aging
	@Temperature 100 Â°C, Time 259000 sec	@Temperature 212 Â°F, Time 72.0 hour	
	27.0 MPa	3920 psi	cured; ASTM D412
	@Temperature 145 Â°C, Time 2990 sec	@Temperature 293 Â°F, Time 0.830 hour	
	12.9 MPa	1870 psi	Aged fuel C
	@Treatment Temp. 25.0 Â°C, Time 259000 sec	@Treatment Temp. 77.0 Â°F, Time 72.0 hour	
	18.1 MPa	2630 psi	Aged ASTM D #1 Oil
	@Treatment Temp. 100 Â°C, Time 259000 sec	@Treatment Temp. 212 Â°F, Time 72.0 hour	
	18.2 MPa	2640 psi	Aged ASTM D #3 Oil
	@Treatment Temp. 100 Â°C, Time 259000 sec	@Treatment Temp. 212 Â°F, Time 72.0 hour	
Elongation at Break	396.5 %	396.5 %	Circulating Oven Aging
	@Temperature 100 Â°C, Time 259000 sec	@Temperature 212 Â°F, Time 72.0 hour	
	420 %	420 %	Cured
	@Temperature 145 Â°C, Time 1190 sec	@Temperature 293 Â°F, Time 0.330 hour	
	590 %	590 %	cured; ASTM D412
	@Temperature 145 Â°C, Time 2990 sec	@Temperature 293 Â°F, Time 0.830 hour	
	370 %	370 %	Aged fuel C
	@Treatment Temp. 25.0 Â°C, Time 259000 sec	@Treatment Temp. 77.0 Â°F, Time 72.0 hour	
	394.5 %	394.5 %	Aged ASTM D #1 Oil
	@Treatment Temp. 100 Â°C, Time 259000 sec	@Treatment Temp. 212 Â°F, Time 72.0 hour	
	398.5 %	398.5 %	Aged ASTM D #3 Oil
	@Treatment Temp. 100	@Treatment Temp. 212	

Mechanical Properties	$^{\circ}\text{C}$ Metric Time 259000 sec	$^{\circ}\text{F}$ English Time 72.0 hour	Comments
300% Modulus	0.0112 GPa @Temperature 145 $^{\circ}\text{C}$, Time 2990 sec	1.62 ksi @Temperature 293 $^{\circ}\text{F}$, Time 0.830 hour	cured; ASTM D412
Rebound	41 % @Temperature 30.0 $^{\circ}\text{C}$	41 % @Temperature 86.0 $^{\circ}\text{F}$	
Abrasion	0.2815	0.2815	AKRON
Compression Set	22.5 % @Temperature 100 $^{\circ}\text{C}$, Time 259000 sec	22.5 % @Temperature 212 $^{\circ}\text{F}$, Time 72.0 hour	160 $^{\circ}\text{C}$ x 30 min. Cured)

Descriptive Properties	Value	Comments
Bound AN Content	0.34	
Color	Tan	
Components	HAF (IRB#7)	40 phr, ASTM D3187
	NBR 6230	100 phr, ASTM D3187
	Stearic Acid	1 phr, ASTM D3187
	Sulfur	1.5 phr, ASTM D3187
	TBBS	0.7 phr, ASTM D3187
	ZnO	3 phr, ASTM D3187
Compound Recipe	Antioxidant(3-C)	1 phr
	Antioxidant(RD)	2 phr
	Carbon Black(SRF)	80 phr
	CZ	2 phr
	NBR 6230	100 phr
	Plasticizer(DOP)	10 phr
	Stearic Acid	1 phr
	Sulfur	0.5 phr
	TT	1 phr
	Zinc Oxide	5 phr

Descriptive Properties	Value	Comments
Rheometer	1.1 min	t ₀ 1, 160Â°C x 12 min, 1Â° Arc, MDR
	1.2 lb-in	ML, 160Â°C x 12 min, 1Â° Arc, MDR
	1.7 min	t'50, 160Â°C x 12 min, 1Â° Arc, MDR
	2.7 min	t'90, 160Â°C x 12 min, 1Â° Arc, MDR
	23.0 lb-in	MH, 160Â°C x 12 min, 1Â° Arc, MDR
Volume Swell	-0.026	Aged ASTM D #3 Oil (100Â°C x 72hrs)
	-0.061	Aged ASTM D #1 Oil (100Â°C x 72hrs)
	0.405	Aged fuel C (RTÂ°C x 72hrs)

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