

## LG Chemical NBR 3250 High Acrylonitrile Polymer

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

### Material Notes:

Description: NBR 3250 is a copolymer of butadiene and acrylonitrile manufactured by cold emulsion polymerization technology of Goodyear Tire and Rubber Company, USA. NBR 3250 is a non staining, medium mooney viscosity, and high acrylonitrile polymer designed to aid in processing operations such as calendaring and extruding for oil and fuel service products. NBR 3250 offers high resistance to fuels, solvents, oils and gas permeation. NBR 3250 is recommended to in industrial and automotive parts such as fuel hoses and packings. NBR 3250 is a low mooney version of NBR 3280.CAS No: 9003-18-3Information provided by LG Chemical

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LG-Chemical-NBR-3250-High-Acrylonitrile-Polymer.php](http://www.lookpolymers.com/polymer_LG-Chemical-NBR-3250-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	55 @Temperature 100 Â°C	55 @Temperature 212 Â°F	ML 1+4
Ash	<= 0.50 %	<= 0.50 %	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	71 @Temperature 150 Â°C, Time 1190 sec	71 @Temperature 302 Â°F, Time 0.330 hour	Cured
	76 @Temperature 100 Â°C, Time 252000 sec	76 @Temperature 212 Â°F, Time 70.0 hour	Circulating Oven Aging
	49 @Treatment Temp. 25.0 Â°C, Time 252000 sec	49 @Treatment Temp. 77.0 Â°F, Time 70.0 hour	Aged fuel C
	74 @Treatment Temp. 100 Â°C, Time 252000 sec	74 @Treatment Temp. 212 Â°F, Time 70.0 hour	Aged ASTM D #3 Oil
	75 @Treatment Temp. 100 Â°C, Time 252000 sec	75 @Treatment Temp. 212 Â°F, Time 70.0 hour	Aged ASTM D #1 Oil
	17.7 MPa	2570 psi	

Mechanical Properties	Metric	English	Comments
	@ Temperature 150 Â°C, Time 1190 sec	@ Temperature 302 Â°F, Time 0.330 hour	
	18.5 MPa	2680 psi	
	@Temperature 100 Â°C, Time 252000 sec	@Temperature 212 Â°F, Time 70.0 hour	Circulating Oven Aging
	31.8 MPa	4610 psi	
	@Temperature 145 Â°C, Time 2990 sec	@Temperature 293 Â°F, Time 0.830 hour	cured; ASTM D412
	13.9 MPa	2020 psi	
	@Treatment Temp. 25.0 Â°C, Time 252000 sec	@Treatment Temp. 77.0 Â°F, Time 70.0 hour	Aged fuel C
	18.1 MPa	2630 psi	
	@Treatment Temp. 100 Â°C, Time 252000 sec	@Treatment Temp. 212 Â°F, Time 70.0 hour	Aged ASTM D #3 Oil
	18.3 MPa	2650 psi	
	@Treatment Temp. 100 Â°C, Time 252000 sec	@Treatment Temp. 212 Â°F, Time 70.0 hour	Aged ASTM D #1 Oil
Elongation at Break	378.8 %	378.8 %	
	@Temperature 100 Â°C, Time 252000 sec	@Temperature 212 Â°F, Time 70.0 hour	Circulating Oven Aging
	410 %	410 %	
	@Temperature 150 Â°C, Time 1190 sec	@Temperature 302 Â°F, Time 0.330 hour	Cured
	544 %	544 %	
	@Temperature 145 Â°C, Time 2990 sec	@Temperature 293 Â°F, Time 0.830 hour	cured; ASTM D412
	370.2 %	370.2 %	
	@Treatment Temp. 25.0 Â°C, Time 252000 sec	@Treatment Temp. 77.0 Â°F, Time 70.0 hour	Aged fuel C
	377.5 %	377.5 %	
	@Treatment Temp. 100 Â°C, Time 252000 sec	@Treatment Temp. 212 Â°F, Time 70.0 hour	Aged ASTM D #1 Oil
	379.5 %	379.5 %	
	@Treatment Temp. 100 Â°C, Time 252000 sec	@Treatment Temp. 212 Â°F, Time 70.0 hour	Aged ASTM D #3 Oil

Mechanical Properties	Metric	English	Comments
300% Modulus	0.0153 GPa @Temperature 145 Å°C, Time 2990 sec	2.22 ksi @Temperature 293 Å°F, Time 0.830 hour	cured; ASTM D412
Compression Set	20.4 % @Temperature 100 Å°C, Time 252000 sec	20.4 % @Temperature 212 Å°F, Time 70.0 hour	160Å°C x 30 min. Cured)

Descriptive Properties	Value	Comments
Bound AN Content	0.415	
Color	Tan	
Components	HAF (IRB#7)	40 phr, ASTM D3187
	NBR 3250	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 3250	100 phr
	Plasticizer(TP-95)	10 phr
	Stearic Acid	1 phr
	Sulfur	0.5 phr
	TT	1 phr
	Zinc Oxide	5 phr
Rheometer	0.8 min	ts1, 160Å°C x 12 min, 1Å° Arc, MDR
	2.5 lb-in	ML, 160Å°C x 12 min, 1Å° Arc, MDR
	2.5 min	t'90, 160Å°C x 12 min, 1Å° Arc, MDR

Descriptive Properties	25.5 lb-in Value	MH, 160A°C x 12 min, 1A° Arc, MDR Comments
Volume Swell	-0.032	Aged ASTM D #3 Oil (100Â°C x 70hrs)
	-0.065	Aged ASTM D #1 Oil (100Â°C x 70hrs)
	0.325	Aged fuel C (RTÂ°C x 70hrs)

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