LG Chemical NBR 7030 High Acrylonitrile Polymer

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

Material Notes:

Description: NBR 7030 is a mechanically fully-fluxed polyblend of 70 parts medium-high acrylonitrile rubber and 30 parts polyvinylchloride resin. Since NBR 7030 are prefluxed, normal temperature for rubber can be adopted during mixing and subsequent factory operations. NBR 7030 has sufficient stabilizer for normal aging conditions and can be processed with normal mixing procedures. It has higher compound strength, relatively better physical properties and good processability for extrusion, providing smooth surface on the resultant products.Applications: These properties make NBR 7030 ideally suited for hose, wire, cable and roll application. NBR 7030 is excellent in resistance to abrasion, ozone, oil, fuel and solvent. It is suggested for use in wire & cable jackets, rolls, shoes, belts and hose (fuel hose, automotive and industrial hoses)CAS No: 9003-18-3Information provided by LG Chemical

Order this product through the following link:
http://www.lookpolymers.com/polymer_LG-Chemical-NBR-7030-High-Acrylonitrile-Polymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	
Volatiles	0.30 %	0.30 %	
Mooney Viscosity	22.5	22.5	ML 1+30; t'5
	28.5	28.5	ML 1+30; t'35
	>= 42.5 @Temperature 125 Â°C	>= 42.5 @Temperature 257 Â°F	ML 1+30
	57 @Temperature 100 Â°C	57 @Temperature 212 Â°F	ML 1+4
Ash	<= 0.70 %	<= 0.70 %	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	72 @Temperature 100 Â°C, Time 259000 sec	72 @Temperature 212 Â°F, Time 72.0 hour	Circulating Oven Aging
	75 @Temperature 175 Â°C, Time 601 sec	75 @Temperature 347 Â°F, Time 0.167 hour	Cured
	42 @Treatment Temp. 25.0 Â°C, Time 259000 sec	42 @Treatment Temp. 77.0 Â°F, Time 72.0 hour	Aged fuel C

Mechanical Properties	Metric	English	Comments
	73 @Treatment Temp. 100 Â°C, Time 259000 sec	73 @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #3 Oil
	85 @Treatment Temp. 100 Â°C, Time 259000 sec	85 @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #1 Oil
Tensile Strength at Break	21.1 MPa @Temperature 175 Â°C, Time 601 sec	3060 psi @Temperature 347 Â°F, Time 0.167 hour	Cured
	21.6 MPa @Temperature 100 Â°C, Time 259000 sec	3130 psi @Temperature 212 Â°F, Time 72.0 hour	Circulating Oven Aging
	23.5 MPa @Temperature 145 Â°C, Time 2990 sec	3410 psi @Temperature 293 Â°F, Time 0.830 hour	cured; ASTM D412
	16.0 MPa @Treatment Temp. 25.0 Â°C, Time 259000 sec	2320 psi @Treatment Temp. 77.0 Â°F, Time 72.0 hour	Aged fuel C
	21.6 MPa @Treatment Temp. 100 Â°C, Time 259000 sec	3130 psi @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #3 Oil
	21.9 MPa @Treatment Temp. 100 Â°C, Time 259000 sec	3180 psi @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #1 Oil
Elongation at Break	500 % @Temperature 100 Â°C, Time 259000 sec	500 % @Temperature 212 Â°F, Time 72.0 hour	Circulating Oven Aging
	511 % @Temperature 145 Â°C, Time 2990 sec	511 % @Temperature 293 Â°F, Time 0.830 hour	cured; ASTM D412
	550 % @Temperature 175 Â°C, Time 601 sec	550 % @Temperature 347 Â°F, Time 0.167 hour	Cured
	523.1 % @Treatment Temp.	523.1 % @Treatment Temp.	Aged fuel C

Mechanical Properties	Metric	English	Comments
	25.0 Â°C, Time 259000 sec	77.0 Â°F, Time 72.0 hour	
	535 % @Treatment Temp. 100 Â°C, Time 259000 sec	535 % @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #1 Oil
	538 % @Treatment Temp. 100 Â°C, Time 259000 sec	538 % @Treatment Temp. 212 Â°F, Time 72.0 hour	Aged ASTM D #3 Oil
300% Modulus	0.0161 GPa @Temperature 145 Â°C, Time 2990 sec	2.33 ksi @Temperature 293 Â°F, Time 0.830 hour	cured; ASTM D412
Abrasion	110	110	[cu mm], Loss
Compression Set	45.2 % @Temperature 100 Â°C, Time 259000 sec	45.2 % @Temperature 212 Â°F, Time 72.0 hour	160Â°C x 30 min. Cured)

Descriptive Properties	Value	Comments
Components	HAF (IRB#7)	40 phr, ASTM D3187
	NBR 6850	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	FEF (N-550)	35
	NBR 7030	100
	NBS (OBTS, NOBS)	0.7
	Plasticizer(DOP)	5
	Spider Sulfur	0.35
	Stabilizer (RD)	1
	Stearic Acid	1
	Sunnoc-N (microwax)	1
	TT	1.4

Descriptive Properties	Value	Comments
	ZnO	5
Medium-High NBR Content	70 part	
PVC Content	30 part	
Rheometer	0.8 lb-in	ML, 170Â°C x 10 min, 1Â° Arc, MDR
	1.3 min	ts1, 170Â°C x 10 min, 1Â° Arc, MDR
	5.0 min	t'90, 170Â°C x 10 min, 1Â° Arc, MDR
	7.5 lb-in	MH, 170Â°C x 10 min, 1Â° Arc, MDR
Volume Swell	-0.052	Aged ASTM D #1 Oil (100Â°C x 72hrs)
	0.076	Aged ASTM D #3 Oil (100Â°C x 72hrs)
	0.572	Aged fuel C (RTÂ°C x 72hrs)

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