Rubber & Specialty Polymers Team / Tech-Center
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NBR 7030

NBR 7030 is a mechanically fully-fluxed polyblend of 70 parts medium-high acrylonitrile rubber and 30 parts polyvinylchloride resin. Since NBR 7030 is already 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 excellent processability for extrusion, providing smooth surface on the resultant products.

These properties make NBR 7030 is ideally suited for hose, wire, cable and roll application.
And also, NBR 7030 is excellent in resistance to abrasion, ozone, oil, and fuel. It is suggested to use for rolls, shoe soles, belts, hoses, wire or/and cable jackets under normal temperature.

BASIC PROPERTIES

Medium-High AN NBR Content(part)	70
PVC Content (part)	30
Volatile Matter(%)	0.2
Ash(%)	0.5
Mooney Viscosity(ML1+4,100℃)	60
Specific Gravity	1.05

Packaging Information
Slab sheet, Weight 25Kg

Shelf Life : 18 months from date of production at room temperatures not exceeding 30℃ under belowed storage condition (Retest critical parameters like MV and others after the expiry of shelf life).

Storage condition
NBR should be stored in warehouse to be protected from sunlight, heat, moisture and foreign materials.

VULCANIZATE PROPERTIES

Recipes(ASTM D3187)

NBR 7030	100.0 phr
HAF(IRB #8)	40.0
ZnO	3.0
Stearic Acid	1.0
TBBS	0.7
Sulfur	1.5
Total	146.2

Stress-Strain Properties
(ASTM D412, 145℃×50min. Cured)

300% Modulus(kg/㎠)	165
Elongation(%)	530
Tensile (kg/㎠)	240

*The above data is a typical value, therefore there may be a slight difference between the elements of a supplied product and the data.

● DAESAN PLANT : Tel 82-41-661-2702 FAX 82-41-661-2709
● R&D CENTER : Tel 82-42-866-5763 FAX 82-42-861-7146
● SEOUL OFFICE : Tel 82-2-3773-7923 FAX 82-2-3773-3071
● PUSAN OFFICE : Tel 82-51-801-2669 FAX 82-51-801-2650

COMPOUND RECIPES	
Formulation	
NBR 7030	100.0 Part
FEF (N-550)	35.0
Plasticizer(DOP)	5.0
ZnO	5.0
Stearic Acid	1.0
Stabilizer (RD)	1.0
Sunnoc-N (microwax)	1.0
NBS (OBTS, NOBS)	0.70
TT	1.40
Spider Sulfur	0.35
Total	149.8

PROPERTIES OF COMPOUNDS	
Mooney Viscosity (ML1+4,100℃)	70
Mooney Scorch (ML1+30, 125℃)	
Minimum Viscosity (minutes)	42.5
t'5 (minutes)	22.5
t'35 (minutes)	28.5
Rheometer(MDR,170℃×10min,0.5˚Arc, MDR)	
ML(lb-in)	0.8
MH (lb-in)	7.5
ts1 (min.)	1.3
Tc'90 (min.)	5.0

Basic Properties(175℃×10min. Cured)	
Hardness(shore A)	75
Elongation(%)	550
Tensile (kg/㎠)	215
Specific Gravity (g/cc)	1.23
Circulating Oven Aging(100℃×72hrs)	
Hardness Change(point)	+3.0
Tensile Change(%)	+5.5
Elongation Change(%)	-50
Aged ASTM #1 Oil(100℃×72hrs)	
Hardness Change(point)	+10
Tensile Change(%)	+8.5
Elongation Change(%)	-15.0
Volume Swell(%)	-5.2
Aged ASTM #3 Oil(100℃×72hrs)	
Hardness Change(point)	-2.0
Tensile Change(%)	+5.2
Elongation Change(%)	-12.0
Volume Swell(%)	+7.6
Aged FUEL C(R.T℃×72hrs)	
Hardness Change(point)	-33.0
Tensile Change(%)	-52.0
Elongation Change(%)	-26.9
Volume Swell(%)	+57.2
Compression Set(160℃×30min. Cured)	
100℃×72hrs(%)	45.2
Gehman Low Temperature Torsional Test (ASTM D1053)	
T10 (℃)	-7.0
DIN Abrasion Resistance	
Abrasion Loss (cu mm)	110
Ozone Resistance, 50pphm, 40℃, Bent loop	
24 Hours	No Crack
48 Hours	No Crack
72 Hours	No Crack
96 Hours	No Crack
168 Hours	No Crack

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