LG Chem

# NBR 6240

NBR 6240 is a copolymer of butadiene and acrylonitrile manufactured by advanced emulsion polymerization technology of Goodyear and LG Chem.

NBR 6240 is a non staining, medium low mooney, and medium high acrylonitrile polymer designed to aid in processing operations such as extruding and calendering. NBR 6240 is a low temperature polymerized polymer, and such as, retains the excellent physical and processing properties of a cold nitrile rubber. NBR 6240 is recommended to use in packings, shoe products, chemically blown sponge, oil field products, industrial and automotive molded parts.

## BASIC PROPERTIES

| | |
|---|---|
| Polymerization | Cold Emulsion |
| Bound AN Content(%) | 34.0 |
| Volatile Matter(%) | 0.3 |
| Ash(%) | Max. 0.5 |
| Stabilizer | Non-Staining |
| Mooney Viscosity(ML1+4,100℃) | 41 |
| Color | Tan |
| Specific Gravity | 0.99 |

Packaging Information

| | |
|---|---|
| Bale Weight | 35kg |

Storage Condition

Rubber should be stored in suitable condition such as no sunlight, no heat and dry place.

## VULCANIZATE PROPERTIES

Recipes(ASTM D3187)

| | |
|---|---|
| NBR 6240 | 100.0 phr |
| HAF(IRB #7) | 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/㎠) | 123 |
| Elongation(%) | 575 |
| Tensile (kg/㎠) | 289 |

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

# NBR 6240 PACKING STUDY

| COMPOUND RECIPES | |
|---|---|
| NBR 6240 | 100 phr |
| Carbon Black(SRF) | 80.0 |
| Zinc Oxide | 5.0 |
| Stearic Acid | 1.0 |
| Antioxidant(RD) | 2.0 |
| Antioxidant(3-C) | 1.0 |
| Plasticizer(DOP) | 10.0 |
| Sulfur | 0.5 |
| TT | 1.0 |
| CZ | 2.0 |
| Total | 202.5 |

| PROPERTIES OF COMPOUNDS | |
|---|---|
| Mooney Viscosity(ML1+4,100℃) | 51 |
| Rheometer(MDR,160℃×12 min,1°Arc, MDR) | |
| ML(lb-in) | 1.4 |
| MH (lb-in) | 23.6 |
| ts1 (min.) | 1.2 |
| Tc'50 (min.) | 1.8 |
| Tc'90 (min.) | 2.8 |

| | |
|---|---|
| Basic Properties(145℃×20min. Cured) | |
| Hardness(shore A) | 69 |
| Elongation(%) | 400 |
| Tensile (kg/㎠) | 187 |
| Circulating Oven Aging(100℃×72hrs) | |
| Hardness Change(point) | +4 |
| Tensile Change(%) | +5.6 |
| Elongation Change(%) | -26.8 |
| Aged ASTM #1 Oil(100℃×72hrs) | |
| Hardness Change(point) | +4 |
| Tensile Change(%) | +4.4 |
| Elongation Change(%) | -27.7 |
| Volume Swell(%) | -6.8 |
| Aged ASTM #3 Oil(100℃×72hrs) | |
| Hardness Change(point) | 0 |
| Tensile Change(%) | +4.9 |
| Elongation Change(%) | -23.0 |
| Volume Swell(%) | -2.8 |
| Aged FUEL C(R.T℃×72hrs) | |
| Hardness Change(point) | -24 |
| Tensile Change(%) | -50.1 |
| Elongation Change(%) | -46.9 |
| Volume Swell(%) | +40.8 |
| Compression Set(160℃×30min. Cured) | |
| 100℃×72hrs(%) | 21.1 |
| Rebound(30℃, %) | 43.1 |
| AKRON Abrasion | 0.2895 |

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LG Chem, Ltd.