

KUMHO NdBR

(Ultra High cis Polybutadiene)

1. Product Introduction

KUMHO NdBR is ultra high cis polybutadiene, and produced by 1, 3-butadiene polymerization with a novel neodymium catalyst. KUMHO NdBR provides excellent abrasion resistance, low heat build-up and high resilience, which are very demanded properties for tire as well as golf-ball applications. Two grades of KUMHO NdBR, classified by Mooney viscosity, are NdBR-40 and NdBR-60.

2. Product Applications

Grade	CAS NO	Packages	Applications
NdBR-40	9003-17-2	35kg / Bale	Tire, Footwears, Golf ball, Belt
NdBR-60		1.05MT / Box	

3. Handling Precautions

The direct expose to sunlight and humidity may cause discoloration or quality deterioration. Keep the product away from direct sunlight, humidity and chemicals and store in a cool, dry place at temperatures below 35°C.

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KUMHO PETROCHEMICAL

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4. Typical Properties

Item	Grade	NdBR-40	NdBR-60
cis-1,4 content (%)		min. 97.0	
Raw Mooney Viscosity (ML ₁₊₄ , 100°C)		43	63
Stabilizer		Non-staining	
Volatile Matter (%)		max. 0.5	
Ash contents (%)		max. 0.5	
Specific Gravity		approx. 0.91	
Mooney Viscosity (ML ₁₊₄ , 100°C) of compounded Rubber * ¹⁾		65	93
Rheometer Properties (160°C, ARC° ± 1°C) * ²⁾			
ML (lbf · in)		9.4	12.5
MH (lbf · in)		40.5	43.9
Ts01 (min)		3.7	3.4
T'50 (min)		8.6	8.4
T'90 (min)		11.3	11.1
300% Modulus (kgf/cm ²) * ³⁾		100	110
Tensile Strength (kgf/cm ²) * ³⁾		220	230
Elongation (%) * ³⁾		520	510

*1) Test formulation according to ASTM-D 3189 (based on IRB #7)

*2) Monsanto Rheometer ODR, 160°C

*3) Press cured 35minutes at 145°C

Note) The above data are typical values ; therefore, they may differ slightly from the physical properties of the supplied product.

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