

KUMHO KBR

HBR(High cis Butadiene Rubber)



1. Product Introduction

KUMHO KBR is a solution high-cis polybutadiene polymer(BR) produced with Ziegler-Natta catalyst based. KUMHO KBR has a 1,4-cis content of more than 94%. In addition to the very low glass transition temperature around -100°, it has excellent abrasion resistance, resiliency, aging resistance, and weather resistance which has made it the most widely used synthetic rubber along with SBR.

We mainly produce KUMHO KBR 01, 01L, 31. KUMHO KBR 01 and 01L are usually used in tires, footwears, golf ball, belt, rubber hoses, and other mechanical rubber products, whereas KBR 31, containing aromatic oil, is mainly used in tire due to its excellent performance in the treads of snow tires.

2. Product Application

Grade	CAS NO	Packaging	Applications
KBR 01 KBR 01L KBR 31	9003-17-2	35kg / Bale 1.05MT / Box	Tire, Footwears, Golf ball, Belt, Mechanical rubber products

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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4. Typical Properties of KUMHO KBR

Items \ Grade		KBR 01	KBR 01L	KBR 31
cis-1,4 Content (%)		min. 94.0		
Extender Oil	Type	-	-	High Aromatic
	Amount (wt%)			27.3
Raw Mooney Viscosity ML ₁₊₄ (100°C)		45	30	35
Stabilizer		Non-Staining		
Volatile Matter (%)		max. 0.5		
Ash Content (%)		max. 0.2		
Specific Gravity		approx. 0.91		approx. 0.93
Mooney Viscosity ML ₁₊₄ (100°C) of Compounded Rubber ¹⁾		55	43	75
Rheometer Properties (160°C, ARC ± 1°) ²⁾				
ML (lbf · in)		8.3	7.0	10.6
MH (lbf · in)		33.5	29.9	36.8
Ts 01 (Min)		3.8	4.9	3.8
T' 50 (Min)		8.5	9.2	7.5
T' 90 (Min)		11.3	12.2	9.7
300% Modulus (kgf/cm ²) ³⁾		91	82	105
Tensile Strength (kgf/cm ²) ³⁾		198	174	190
Elongation (%) ³⁾		540	550	500


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


2) Monsanto Rheometer ODR, 160°


3) Press cured 35minutes at 145°

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


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