

# KOSYN KNB

NBR (Acrylonitrile Butadiene Rubber)



## 1. Product Introduction

KOSYN KNB is a cold emulsion copolymer of acrylonitrile and butadiene. It has excellent resistance to hydrocarbon solvents, vegetable oils, acids, alkalis, and many other liquids and gases. Resistance to abrasion, heat, water, and flexing are also provided by our NBR. KOSYN KNB is suitable for injection molding of rubber products with various shapes, and it can be used with a relatively large amount of plasticizer.

## 2. Product Application

Grade	Packages	Applications
KNB 25LM	35kg / Bag, 1.05MT / Box	Packings, Gaskets, Hoses, Rolls, Shoe soles and heels, Other applications requiring oil resistance
KNB 25M		
KNB 25LH		
KNB 25H		
KNB 25SH		
KNB 35LL		
KNB 35L		
KNB 35LM		
KNB 35M		
KNB 35H		
KNB 0230		
KNB 0230L		
KNB 40M		
KNB 40H		

## 3. Handling Precautions

Direct exposure to sunlight and humidity may cause discoloration or quality deterioration. Keep the product away from direct sunlight, humidity and impurities, and store in a cool place.



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## 4. Typical Properties for KOSYN KNB

Item	Grade	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	
		25LM	25M	25LH	25H	25SH	35LL	35L	35LM	35M	35H	40M	40H	0230	0230L
Bound AN (%)		28					34					41		35	
Raw MV (ML <sub>1+4</sub> , 100°C)		50	60	70	80	100	33	41	50	60	80	60	80	56	42
Specific Gravity		0.96					0.98					1.00		0.98	
Compound Properties <sup>*1)</sup>															
Compound MV (ML <sub>1+4</sub> , 100°C)		73	90	101	114	140	54	66	78	90	110	92	113	60	64
Rheometer (160°C, ARC ±1°)															
ML (lbf · in)		14.1	15.7	18.0	21.0	23.5	9.7	10.4	11.9	15.5	16.5	11.5	13.9	11.6	10.9
MH (lbf · in)		40.4	41.0	42.0	43.5	45.5	38.9	40.2	41.4	44.0	46.3	41.9	45.1	43.2	42.7
Ts 1 (Min)		3.0	2.9	3.3	3.0	3.0	3.8	3.1	2.2	2.0	2.2	3.2	2.7	2.3	2.6
T' 50 (Min)		4.7	4.3	4.9	4.7	4.8	6.0	5.2	4.2	4.2	4.0	6.6	6.2	3.8	4.0
T' 90 (Min)		17.0	16.9	16.0	15.6	16.5	16.9	16.3	15.3	16.3	16.1	19.6	20.1	12.9	12.4
Cured <sup>*2)</sup>															
300% Modulus (kgf/cm <sup>2</sup> )		140	155	168	175	185	132	141	148	153	168	160	170	160	150
Tensile Strength (kgf/cm <sup>2</sup> )		275	285	285	285	290	300	310	313	327	334	345	360	300	295
Elongation (%)		510	480	440	400	310	570	550	530	520	500	560	540	500	510
Hardness (Shore-A)		73	73	73	73	73	74	74	74	74	74	75	75	74	74
ASTM#1 Oil Immersion Change <sup>*3)</sup>															
300% Modulus (%)		23	22	24	24	25	42	35	39	40	43	45	47	40	38
Tensile strength (%)		-7	-8	-8	-10	-13	-8	-13	-6	-6	-4	-1	-1	-3	-3
Elongation (%)		-20	-20	-23	-18	-21	-29	-28	-23	-21	-20	-26	-29	-25	-24
Hardness (Change %)		-4	-4	-4	-3	-3	0	0	0	-1	0	4	4	-1	-1
Volume (Change %)		2	2	2	3	1	-1	0	0	0	0	0	-1	0	0

1) NBR 100, ZnO 3, S/A 1, HAF Black (IRB#7) 40, Accelerator TBBS 0.7, Sulfur 1.5

Total : 146.2

2) 150°C X 40Min. Press cured

3) 100°C X 70hrs. Change Rate

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

### Overseas Sales Team

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