

kuraray

**Kuraray
Liquid Rubber
for EPDM Applications**

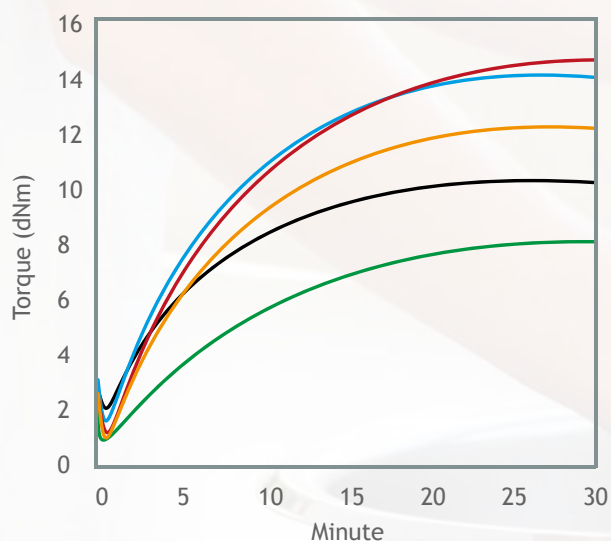
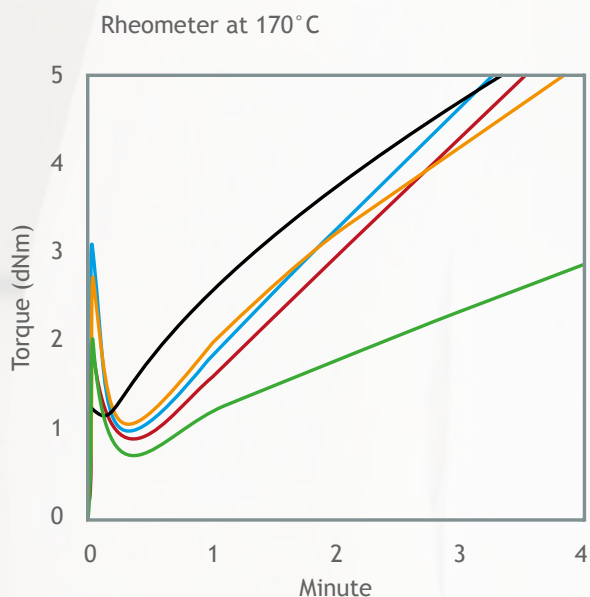


Kuraray Liquid Rubber for EPDM Applications



Kuraray has developed several liquid rubber grades that are suitable for EPDM peroxide curing applications. Specifically, substituting LBR-361 for TAC as a coagent will offer similar mechanical properties while reducing volatile organic compound (VOC) content. Possible applications include plumbing components since the Kuraray Liquid Rubber / EPDM compounds can meet local drinking water regulations. Also, LBR-361 improves compression set which is beneficial for rubber compounds used to produce automotive parts, hoses, etc.

Curing kinetics for LBR-361 versus references



— Reference (No Coagent)
— LBR-302: 10phr
— LBR-361: 10phr

— TAC: 4phr
— LBR-352: 10phr

Mechanical properties

	Control-1 No Coagent	Control-2 4 phr. TAC	LBR-302 Low Vinyl Type PBd	LBR-352 Med. Vinyl Type PBd	LBR-361* High Vinyl Type PBd
MW	-	-	5500	9000	5500
Mooney Viscosity (100 °C)	58	49	38	45	47
Hardness (Shore A)	51	55	46	56	57
Tensile Strength (MPa)	16.5	13.2	10.6	12.7	11.4
Elongation (%)	760	360	677	385	311
Modulus 100% (MPa)	1.2	1.9	0.9	4.8	2.0
Modulus 300% (MPa)	4.9	10.1	3.5	9.3	11.0
Compression Set** (%)	27.1	9.3	26.3	18.5	9.3

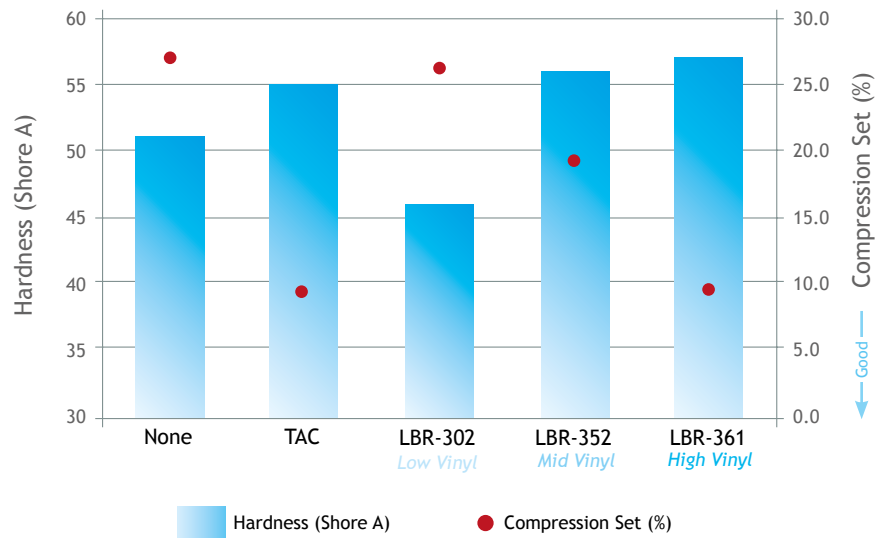
Component	Phr.
EPDM	100
Carbon black	50
Paraffinic oil	25
Peroxide	4
PBd Coagent	10

* Development grade

** After 72h at 100°C, 25% deformation



Grades for all needs



LBR-361 provides the optimum soft-elasticity ratio described by hardness versus compression set.

Recommended grade by desired property

Excellent mechanical property:

With low molecular weight plus high vinyl content

➔ **LBR-361**

Maximum softness:

With low molecular weight plus low vinyl content

➔ **LBR-302**

Adding value to your products - worldwide



Kuraray is a world leader in specialty chemicals and functional materials. We are committed to developing products that ensure quality and value while helping our customers differentiate themselves from their competition.

The history of Kuraray's Elastomer division started in 1972 with the production of polyisoprene rubber and the development of new rubber materials based on Isoprene in the Kashima plant. From the

first production line, the Elastomer Division continuously grew and invented new products such as Kuraray Liquid Rubber, ISOBAM, SEPTON™, HYBRAR™, and KURARITY™.

Kuraray strives to develop new and innovative high performance products for customers around the globe. If you would like to know more about Kuraray's Elastomer products please also visit our website www.elastomer.kuraray.com

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Disclaimer: Precautions should be taken in handling and storage. Please refer to the appropriate Safety Data Sheet for further safety information. In using Kuraray Liquid Rubber, please confirm related laws and regulations, and examine its safety and suitability for the application. For medical, health care and food contact applications, please contact your Kuraray Liquid Rubber representative for specific recommendations. Kuraray Liquid Rubber should not be used in any devices or materials intended for implantation in the human body. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.