



X_BUTYL® REGULAR BUTYL RUBBER FOR CURING BLADDERS

Curing bladders are a key component in the building of radial tires. An unvulcanized tire is placed in a mold with the curing bladder located on the inside of the mold cavity. Pressurized steam is used to inflate the bladder stimulating the curing process and giving the tire its final shape. The demands of this application require careful selection of the polymer type to ensure the curing bladder is long lasting as it undergoes numerous cure cycles.

When curing bladder compounds based on regular X_Butyl® are correctly formulated and processed, they

possess:

- very low permeability to gases and steam
- high resistance to heat
- excellent hot tear and crack growth resistance
- low compression and permanent set

In addition, a blend of a butyl polymer with high unsaturation (X_Butyl® RB 301) with a butyl polymer lower unsaturation (X_Butyl® RB 100) has been shown to provide improved aging properties.

PRODUCT PROPERTIES

Grade	X_Butyl® RB 301	X_Butyl® RB 100	X_Butyl® RB 402
Mooney Viscosity (ML 1+ 8, 125 °C, MU)	51	33	33
Unsaturation (mol%)	1.85	0.9	2.25
Volatile Matter (wt%)	<0.3	<0.3	<0.3

TYPICAL COMPOUND FORMULATION

Ingredient	phr
X_Butyl® RB 301	95
Chloroprene	5
Carbon Black	50
Stearic Acid	1
Castor Oil	5
Zinc Oxide	5
Phenolic Resin	10

Mechanical Properties	Unit	Typical Value*
Hardness	(ShA)	63
Tensile Strength	(MPa)	13
Modulus 100%	(MPa)	1.9
Modulus 200%	(MPa)	3.4
Elongation at break	(%)	670
Tear Strength	(kN/m)	40
Crack Growth Resistance to 600%	(kcycles)	>250
Compression Set (70 h/100 °C)	(%)	30

*These items are provided as general information only. They are approximate values and are not considered part of the product specifications. Please contact your regional representative for additional information.

TIRE AND SPECIALTY RUBBERS GLOBAL FOOTPRINT



WE ARE HAPPY TO SUPPORT YOUR BUSINESS

NAFTA

Technical Service

Judy Douglas

E-mail: judy.douglas@arlanxeo.com

Phone: +1 412 809 3547

Sales

John Sawaya

E-mail: john.sawaya@arlanxeo.com

Phone: +1 412 809 1530

EMEA

Technical Service

Luc ter Bogt

E-mail: luc.terbogt@arlanxeo.com

Phone: +49 221 8885 3998

Sales

Marco Eira

E-mail: marco.eira@arlanxeo.com

Phone: +41 26 422 8354

APAC

Technical Service

Esther Han

E-mail: esther.han@arlanxeo.com

Phone: +65 6725 5709

Sales

JooSang Kim

E-mail: joosang.kim@arlanxeo.com

Phone: +65 6725 5872

LATAM

Technical Service

Marcus Moutinho

E-mail: marcus.moutinho@arlanxeo.com

Phone: +55 21 2677 1219

Sales

Sergio Botafogo

E-mail: sergio.botafogo@arlanxeo.com

Phone: +55 21 2677 1344

Please contact us for additional information or visit us at
www.tsr.arlanxeo.com

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Note: The information contained in this publication is current as of May 2017.

Please contact ARLANXEO USA LLC to determine if this publication has been revised.