ExxonMobil Chemical

Exxon™ Chlorobutyl Rubber

Product Sales Specification

Effective: January 4, 2010

Description

Exxon™ chlorobutyl rubber is a chlorinated copolymer of isobutylene and isoprene. The product has a characteristic specific gravity of 0.93. The product form is white to light amber bales.

Grades		1066	1068
Product Specifications			
Mooney viscosity			
ML 1+ 8 (125°C)		38 ± 5	50 ± 5
Antioxidant (non-staining)	wt%	0.02 min	0.02 min
Chlorine	wt%	1.26 ± 0.08	1.26 ± 0.08
Water	wt%	0.3 max	0.3 max
Performance Specifications			
Cure Characteristics			
MH	dN.m	41.0 ± 7.0	45.0 ± 7.0
ML	dN.m	14.0 ± 4.5	17.0 ± 4.5
ts2	mins	2.0 ± 1.5	2.0 ± 1.5
t'50	mins	5.0 ± 3.0	5.0 ± 3.0
t'90	mins	13.0 ± 4.0	13.0 ± 4.0

Test Methods

Mooney viscosity	ASTM D 1646, modified	MV 2000 or equivalent.
Antioxidant	ExxonMobil test method	
Chlorine	ExxonMobil test method	
Water	ExxonMobil test method	
Chlorobutyl standard compound	ASTM D 3958, modified	
Cure characteristics	ASTM D 2084, modified	Rheometer ODR 2000.

Exxon™ chlorobutyl rubber is registered in the Toxic Substance Control Act Inventory under CAS number 68081-82-3.
All ASTM methods shown may be modified by the ExxonMobil laboratory.
Product sales specifications were developed pursuant to ExxonMobil testing and sampling procedures. Procedures available upon request. Specification and/or procedures are subject to change without notice unless otherwise agreed in writing. ExxonMobil Chemical products, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use. Please contact us for further information prior to using any ExxonMobil Chemical product in any medical application.

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Tomorrow's Technology. Applied Today.

ExxonMobil Chemical has been at the forefront of technology and innovation in the rubber industry since inventing and patenting butyl rubber in 1937. Today we market high-quality synthetic rubber worldwide and are a global leader in butyl technology, services and products.

Let our technology-driven focus and commitment to improve processes and products help your business meet its supply requirements and grow profitably. Benefit from access to our global marketing and product expertise, as well as our state-of-the-art technology centers.

2006 **Expansion of halobutyl capacity** at Kashima (Japan) plant by 17,000 tons per year.

2008 **Expansion of halobutyl capacity** at Baytown (USA) plant by 60 percent.

First application of Exxcore™ DVA resin based tire innerliners, setting the stage for lighter and more durable tires that hold air longer and help reduce fuel consumption and CO_2 emissions.

Signature of **Heads of Agreement** (HOA) between Saudi Basic Industries Corporation (SABIC) and affiliates of ExxonMobil Chemical in 2008 to progress detailed studies for **a new elastomers project** at the petrochemical joint ventures at Kemya and Yanpet (Saudi Arabia). The project would establish a domestic supply of over **400 KTA** of carbon black, rubber and thermoplastic specialty polymers including butyl rubber, EPDM, TPO and SBR/PBR to supply local and international markets.

2009 **Successful pilot-plant demonstration of next generation of butyl rubber,** benefiting from **nanocomposite technology**, with the goal of doubling the number of tire innerliner applications that can be served from existing halobutyl capacity to meet growing demand.

2010 **Increase in butyl rubber production capacity by 18,000 tons per year** at the Japan Butyl Co. Ltd. (Kawasaki) Plant. This expansion will increase plant capacity by 23 percent to 98,000 tons per year utilizing new ExxonMobil proprietary process technology.

To find out more about ExxonMobil Chemical butyl rubber, visit our website.

www.butylrubber.com