Lion Elastomers LLC

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SBR 1763 Elastomer Product Data

SBR 1763 is an environmentally friendly version of SBR 1721 replacing aromatic extender oil with a naphthenic oil. It was developed for tire applications.

Unique Features

- Cold polymerized styrene-butadiene elastomer
- Naphthenic oil extended

Applications

- Passenger & heavy-service treads
- Retread rubbers and bicycle tires

Typical Properties

Property	Test Method*	Typical
Polymer, parts ……..	—	100
Oil, parts – Naphthenic ……	—	37.5
Mooney viscosity, MML 1+4 (100˚C) ……	—	45 - 55
Bound Styrene, Weight % ……..	—	22.5 – 24.5
Organic acid, Weight % ……..	—	4.0 – 6.0
Soap, Weight % ……	—	0.5 Max.
Ash, Weight % ……..	—	0.80 Max.
Volatile matter, Weight %	ZS 1008K	0.75 Max.
Emulsifier ……..	—	Mixed acid
Coagulant ……..	—	Acid
Stabilizer ……	—	Staining
Specific gravity, g/cc (bale)…..……	ASTM D-792	0.95
Physical form**, lbs/bale ……	—	80.0 (36 kg)

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* Company Test Methods
** This product is available in 80 lb rectangular bales individually wrapped in 1.5 mil, low melting point film and shipped in returnable aluminum OTD.

Note: *Antioxidant is added to this polymer to provide protection during manufacture and storage. The end user's process may require additional antioxidant protection.*

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Rheometric Properties (MDR 2000 rheometer)

Property	Result
M_L lbf-in	0.8 – 2.8
dN-m	0.9 – 3.2
M_H lbf-in	10.3 – 14.3
dN-m	11.6 – 14.9
t_s 1, minutes	4.1 – 6.1
t' 50, minutes	7.0 – 11.0
t' 90, minutes	12.8 – 17.8

MRG Test Recipe (ASTM 3185 2B)	Weight	Reference Material
SBR 1763 oil-extended elastomer	137.5	
Zinc oxide	3.0	IRM 91A
Sulphur	1.75	NIST SRM 371
Stearic acid	1.0	NIST SRM 372
Oil furnace black	68.75	IRB #8
TBBS	1.38	NIST RM 8384

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