



Lion Elastomers LLC

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SBR 1789 Elastomer

Product Data

SBR 1789 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with a non-hazardous RAE oil. SBR 1789 contains a higher level of bound styrene. It was developed for tire applications.

Unique Features

- ▶ Cold polymerized styrene-butadiene elastomer
- ▶ Higher bound styrene & RAE oil extended

Applications

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

Typical Properties

<u>Property</u>	<u>Test Method*</u>	<u>Typical</u>
Polymer, parts	—	100
Oil, parts – RAE	—	37.5
Mooney viscosity, MML 1+4 (100°C)	—	47 - 57
Bound Styrene, Weight %	—	39.0 – 41.0
Organic acid, Weight %	—	3.5 – 5.9
Soap, Weight %	—	0.5 Max.
Ash, Weight %	—	0.70 Max.
Volatile matter, Weight %	ZS 1008K	0.75 Max.
Emulsifier	—	Mixed acid
Coagulant	—	Acid or Salt Acid
Stabilizer	—	Staining
Specific gravity, g/cc (bale).....	ASTM D-792	0.95
Physical form**, lbs/bale	—	80.0 (36 kg)

SBR 1789 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with an RAE oil, and containing a higher level of bound styrene. It is recommended for applications such as passenger and heavy-service treads, retread rubbers, and bicycle tires.

* 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)

<u>Property</u>	<u>Result</u>
M _L lbf-in	1.2 – 3.2
dN-m	1.4 – 3.6
M _H lbf-in	10.3 – 14.3
dN-m	11.7 – 16.2
t _s 1, minutes	3.2 – 5.2
t' 50, minutes	7.2 – 11.2
t' 90, minutes	13.7 – 18.7

<u>MRG Test Recipe (ASTM 3185 2B)</u>	<u>Weight</u>	<u>Reference Material</u>
SBR 1789 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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