



Lion Elastomers LLC

1615 Main Street • P.O. Box 667 • Port Neches, TX 77651  
800 / 535-9960 • www.lionelastomers.com

## 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.*

## **SBR 1789 Elastomer**

### **Rheometric Properties (MDR 2000 rheometer)**

<b><u>Property</u></b>	<b><u>Result</u></b>
M <sub>L</sub> lbf-in .....	1.2 – 3.2
dN-m .....	1.4 – 3.6
M <sub>H</sub> lbf-in .....	10.3 – 14.3
dN-m .....	11.7 – 16.2
t <sub>s</sub> 1, minutes .....	3.2 – 5.2
t' 50, minutes .....	7.2 – 11.2
t' 90, minutes .....	13.7 – 18.7

### **MRG Test Recipe (ASTM 3185 2B)**

	<b><u>Weight</u></b>	<b><u>Reference Material</u></b>
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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