



Lion Elastomers LLC

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## SBR 1712 Elastomer

## Product Data

SBR 1712 is a general-purpose cold polymerized, oil-extended elastomer. It has excellent processing properties and superior polymer stability.

### Unique Features

- ▶ Cold polymerized styrene-butadiene elastomer
- ▶ Oil extended for improved processing

### Applications

- ▶ Passenger & heavy-service treads
- ▶ Retread rubbers and bicycle tires
- ▶ Molded & extruded goods, and wire and cable

### Typical Properties

<u>Property</u>	<u>Test Method*</u>	<u>Typical</u>
Polymer, parts .....	—	100
Oil, parts – Hi aromatic .....	—	37.5
Mooney viscosity, MML 1+4 (100°C) .....	—	40 - 50
Bound Styrene, Weight % .....	—	22.5 – 24.5
Organic acid, Weight % .....	—	4.0 – 6.0
Soap, Weight % .....	—	0.5 Max.
Ash, Weight % .....	—	0.70 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)

**SBR 1712 is widely used, and is recommended for such diverse applications as passenger and heavy-service treads, retread rubbers, bicycle tires, molded and extruded goods, automotive products, seals, hard rubber and wire and cable.**

\* 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 cardboard containers.

**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 1712 Elastomer**

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

<b><u>Property</u></b>	<b><u>Result</u></b>
M <sub>L</sub> lbf-in .....	0.7 – 2.7
dN-m .....	0.8 – 3.1
M <sub>H</sub> lbf-in .....	10.1 – 14.1
dN-m .....	11.4 – 15.9
t <sub>s</sub> 1, minutes .....	4.2 – 6.2
t' 50, minutes .....	6.4 – 10.4
t' 90, minutes .....	11.4 – 16.4

<b><u>MRG Test Recipe (ASTM 3185 2B)</u></b>	<b><u>Weight</u></b>	<b><u>Reference Material</u></b>
SBR 1712 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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