



Lion Elastomers LLC

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## SBR 1783 Elastomer

## Product Data

SBR 1783 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with a 37.5 parts of low Polycyclic Aromatic Hydrocarbon RAE oil. It was developed for tire applications.

### Unique Features

- ▶ Cold polymerized styrene-butadiene elastomer
- ▶ Lower Mooney viscosity & 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>
Bound Styrene, % .....	ASTM D5775	22.5 – 24.5
Mooney viscosity, MML 1+4 (100°C) .....	ASTM D1646	47 - 57
Oil Weight %.....	ASTM D5774	25.8 – 28.8
Oil, type .....	RAE	
Organic acid, Weight % .....	ASTM D5774	4.0 – 6.0
Soap, Weight % .....	ASTM D5774	0.5 Max.
Ash, Weight % .....	ASTM D5667	0.80 Max.
Volatile matter, Weight % .....	ASTM D5668	0.75 Max.
Emulsifier .....	—	Mixed acid
Coagulant .....	—	Acid
Stabilizer .....	—	Staining
Specific gravity, g/cc (bale).....	—	0.95
Physical form*, lbs/bale .....	—	72.75 (33 kg)

**SBR 1783 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with an RAE oil. It is recommended for applications such as passenger and heavy-service treads, retread rubbers, and bicycle tires.**

\* This product is available in 77.25 lb. rectangular bales individually wrapped in 1.5 mil, low melting point film and shipped in returnable Metal Bin

*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 1783 Elastomer**

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

**Test Method** – ASTM D5289\*\*

<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 .....	9.8 – 13.8
dN-m .....	11.1 – 15.6
t <sub>s</sub> 1, minutes .....	4.3 – 6.3
t' 50, minutes .....	6.9 – 10.9
t' 90, minutes .....	13.7 – 18.7

<b><u>Test Formula (ASTM D3185 2B)</u></b>	<b><u>Quantity, Parts by Mass</u></b>	<b><u>Material</u></b>
SBR 1783L oil-extended elastomer .....	137.50	
Zinc oxide .....	3.00	IRM 91A
Sulfur .....	1.75	IRM 031
Stearic acid .....	1.00	IRM 021
Oil furnace black .....	68.75	IRB #8
TBBS .....	1.38	IRM 003

\*\*160°C, 1°Arc

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