



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.

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Rheometric Properties (MDR 2000 rheometer)

Test Method – ASTM D5289**

<u>Property</u>	<u>Result</u>
M _L lbf-in	0.7 – 2.7
dN-m	0.8 – 3.1
M _H lbf-in	9.8 – 13.8
dN-m	11.1 – 15.6
t _s 1, minutes	4.3 – 6.3
t' 50, minutes	6.9 – 10.9
t' 90, minutes	13.7 – 18.7

<u>Test Formula (ASTM D3185 2B)</u>	<u>Quantity, Parts by Mass</u>	<u>Material</u>
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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