



Lion Elastomers LLC

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SBR 1712 Elastomer

Product Data

SBR 1712 is a general-purpose cold polymerized elastomer extended with 37.5 parts of highly aromatic oil. 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>
Bound Styrene, Weight %	ASTM D5775	22.5 – 24.5
Mooney viscosity, MML 1+4 (100°C)	ASTM D1646	40 - 50
Oil, Weight %.....	ASTM D5774	25.8 – 28.8
Oil, type.....	Highly Aromatic	37.5
Organic acid, Weight %	ASTM D5774	4.0 – 6.0
Soap, Weight %	ASTM D5774	0.5 Max.
Ash, Weight %	ASTM D5667	0.70 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	—	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.

* 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.

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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	10.1 – 14.1
dN-m	11.4 – 15.9
t _s 1, minutes	4.2 – 6.2
t' 50, minutes	6.4 – 10.4
t' 90, minutes	11.4 – 16.4

<u>Test Formula (ASTM D3185 2B)</u>	<u>Quantity, Parts by Mass</u>	<u>Material</u>
SBR 1712 oil-extended elastomer	137.50	
Zinc oxide	3.00	IRM 91A
Sulphur	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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