



Lion Elastomers LLC

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## SBR 1686 Elastomer

## Product Data

SBR 1686 is a carbon black master batch (CBMB) based on SBR 1500 latex and N-330 carbon black. It has a low level of oil extension and provides high tensile properties.

### Unique Features

- ▶ Cold polymerized styrene-butadiene elastomer
- ▶ Carbon black master batch
- ▶ Low level extender oil

### Applications

- ▶ Tire treading
- ▶ Conveyor belting and mechanical rubber goods

### Typical Properties

<u>Property</u>	<u>Test Method*</u>	<u>Typical</u>
Polymer, parts .....	—	100
Carbon black, N-330 .....	—	52
Oil, parts – RAE .....	—	10
Mooney viscosity, UMS 4+4 (100°C) .....	—	37 - 57
Bound Styrene, Weight % .....	—	22.5 – 24.5
Organic acid, Weight % .....	—	3.1 – 5.1
Soap, Weight % .....	—	0.5 Max.
Ash, Weight % .....	—	0.50 Max.
Volatile matter, Weight % .....	ZS 1008K	0.75 Max.
Carbon black, Weight % .....	—	30.6 – 33.6
Emulsifier .....	—	Rosin acid
Coagulant .....	—	Acid
Stabilizer .....	—	Staining
Specific gravity, g/cc (bale).....	ASTM D-792	1.12
Physical form**, lbs./bale .....	—	90.0 (41 kg)

**SBR 1686 is an oil extended, carbon black master batch SBR with 52 parts of N-330 carbon black. Low level extender oil provides high tensile properties in a variety of rubber goods such as tire treads, conveyor belts and mechanical rubber goods.**

\* Company Test Methods

\*\* This product is available in 90 lb. rectangular bales, shipped stretch wrapped on a wooden pallet. Bales are dipped.

**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 1686 Elastomer**

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

<b><u>Property</u></b>	<b><u>Result</u></b>
M <sub>L</sub> lbf-in .....	0.4 – 2.4
dN-m .....	0.5 – 2.7
M <sub>H</sub> lbf-in .....	12.2 – 16.2
dN-m .....	13.8 – 18.3
t <sub>s</sub> 1, minutes .....	4.4 – 6.4
t' 50, minutes .....	7.3 – 11.3
t' 90, minutes .....	12.6 – 17.6

<b><u>MRG Test Recipe (ASTM 3186)</u></b>	<b><u>Weight</u></b>	<b><u>Reference Material</u></b>
SBR 1606L oil-extended, CBMB elastomer .....	162	
Zinc oxide .....	3.0	IRM 91A
Sulphur .....	1.75	NIST SRM 371
Stearic acid .....	1.5	NIST SRM 372
TBBS .....	1.25	NIST RM 8384

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