



Lion Elastomers LLC

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SBR 1769 Elastomer

Product Data

SBR 1769 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with 37.5 parts of low Polycyclic Aromatic Hydrocarbon naphthenic oil. SBR 1769 contains a higher level of bound styrene than 1712. It was developed for tire applications.

Unique Features

- ▶ Cold polymerized styrene-butadiene elastomer
- ▶ Highest bound styrene and naphthenic oil extender

Applications

- ▶ Passenger & heavy-service treads
- ▶ Retread rubbers and bicycle tires

Typical Properties

| <u>Property</u> | <u>Test Method</u> | <u>Typical</u> |
|---|--------------------|----------------|
| Bound Styrene, Weight % | ASTM D5775 | 39.0 – 41.0 |
| Mooney viscosity, MML 1+4 (100°C) | ASTM D1646 | 45 - 55 |
| Oil, Weight %..... | ASTM D5774 | 25.8 – 28.8 |
| Oil Type..... | Naphthenic | |
| Organic acid, Weight % | ASTM D5774 | 4.1 – 5.7 |
| Soap, Weight % | ASTM D 5774 | 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 1769 is an environmentally friendly version of SBR 17121 replacing aromatic extender oil with a naphthenic oil. It is recommended for applications such as passenger and heavy-service treads, retread rubbers, and bicycle tires.

* This product is available in 80 lb rectangular bales individually wrapped in 1.5 mil, low melting point film and shipped in cardboard containers or returnable aluminum OTD.

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 | 1.2 – 3.2 |
| dN-m | 1.4 – 3.6 |
| M _H lbf-in | 10.6 – 14.6 |
| dN-m | 12.0 – 16.5 |
| t _s 1, minutes | 3.6 – 5.6 |
| t' 50, minutes | 7.2 – 11.2 |
| t' 90, minutes | 13.8 – 18.8 |

| <u>Test Formula (ASTM D3185 2B)</u> | <u>Quantity, Parts</u> | <u>Material</u> |
|---------------------------------------|------------------------|-----------------|
| | <u>by Mass</u> | |
| SBR 1769 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

SBR 1769 is an environmentally friendly version of SBR 1721 replacing aromatic extender oil with a naphthenic oil containing a higher level of bound styrene. Applications include passenger tires and heavy-service treads, retread rubbers, and bicycle tires.

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