Lion Elastomers LLC

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# SBR 1769 Elastomer Product Data

SBR 1769 is an environmentally friendly version of SBR 1721 with the highest bound styrene content, and a naphthenic oil extender oil. 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

| Property | Test Method* | Typical |
|---|---|---|
| Polymer, parts …….. | — | 100 |
| Oil, parts – Naphthenic ……. | — | 37.5 |
| Mooney viscosity, MML 1+4 (100˚C) ……. | — | 45 - 55 |
| Bound Styrene, Weight % …….. | — | 39.0 – 41.0 |
| Organic acid, Weight % …….. | — | 4.1 – 5.7 |
| Soap, Weight % ……. | — | 0.5 Max. |
| Ash, Weight % …….. | — | 0.70 Max. |
| Volatile matter, Weight % ..... | ZS 1008K | 0.75 Max. |
| Emulsifier …….. | — | Mixed acid |
| Coagulant …….. | — | Acid |
| Stabilizer ……. | — | Staining |
| Specific gravity, g/cc (bale)…..…….. | ASTM D-792 | 0.95 |
| Physical form**, lbs/bale …… | — | 80.0 (36 kg) |

**SBR 1769 is an environmentally friendly version of SBR 1721 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.**

* Company Test Methods
** 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)

| Property | Result |
|---|---|
| $M_L$ 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 |

| MRG Test Recipe (ASTM 3185 2B) | Weight | Reference Material |
|---|---|---|
| SBR 1769 oil-extended elastomer | 137.5 | |
| Zinc oxide | 3.0 | IRM 91A |
| Sulphur | 1.75 | NIST SRM 371 |
| Stearic acid | 1.0 | NIST SRM 372 |
| Oil furnace black | 68.75 | IRB #8 |
| TBBS | 1.38 | NIST RM 8384 |

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