

## SKS-1739 / SBR-1739

Styrene-Butadiene Rubber

### Specifications

Styrene-butadiene rubber SKS-1739 (SBR -1739) is the copolymer of styrene and butadiene manufactured by cold emulsion polymerization using mixed rosin acid/fatty acid soaps, filled with TDAE-type oil and staining antioxidant.

- REACH registered.
- Application: SKS-1739 (SBR-1739) is a special-purpose rubber, used in production of high speed automobile tires and heat-resistant conveyor belts.

Rubber should not contain any foreign impurities and must meet the following requirements:

- Appearance: briquettes (bales)
- Weight: 30.0+/-1.0 kg
- Colour: from light-brown to dark-brown

The product must meet the following quality parameters:

Parameter	Standard	Test Method
<b>Mooney viscosity ML 1+4 (100°C)*</b>	50-60	ASTM D 1646 (para. 7.2.2)
<b>Viscosity spread within a batch, units, max*</b>	6	
<b>Volatile matter content, %, max (1 hour)*</b>	0.75	ASTM D 5668 (method C)
<b>Oil (TDAE) content, %*</b>	25-29	ASTM D 5774
<b>Bound styrene content, %*</b>	38.5-41.5	ASTM D 5775
<b>Ash content, %, max*</b>	0.6	ASTM D 5667 (part A)
<b>Organic acids content, %*</b>	4.0-6.0	ASTM D 5774
<b>Organic acids soaps content, %, max*</b>	0.4	ASTM D 5774
<b>Antioxidant content, %:</b>		
– VS-1 or*	0.3-0.7	Method of supplier
– Agidol-2*	0.6-1.2	Method of supplier

Rheometric Properties	Standard	Test Method
ML, dNm**	2.1+/-1.0	ASTM D 5289
MH, dNm**	15.8+/-2.5	ASTM D 5289
ts1, min**	3.9+/-1.0	ASTM D 5289
t'50,min**	7.7+/-1.5	ASTM D 5289
t'90,min**	14.6+/-2.0	ASTM D 5289

\* - specified in the certificate of quality.

\*\* - non-rejectable.

Preparation of rubber mixes is carried out in accordance with ASTM D 3185 recipe 1A, mixing – according to method A. Mixing mills are prepared according to ASTM D 3182. Rheometric properties are determined according to ASTM D 5289 using an MDR 2000 rheometer (flow meter). Wait time for rubber mix before testing is 2-6 hours.

## Rubber mix recipe and measurement conditions:

Rubber mix recipe in parts by weight:	Standard
Rubber	100.00
Zinc oxide	3.00
IRB 7 (N330) carbon black	50.00
Sulphur	1.75
Stearic acid	1.00
TBBS (N-tert-Butyl-2-benzothiazolesulfenamide)	1.00

Rheometer MDR 2000, measurement conditions:	Standard
Temperature, °C	160
Duration, min	30
Oscillation amplitude, deg.	+/-0.5
Oscillation frequency, Hz	1.7

**Packaging:** Rubber briquettes (bales) are packaged in marked PE film (thickness of 0.05 +/- 0.01 mm, melting temperature of 108-112oC), then – in plastic box pallets of 450kg or in plywood containers of 1,080kg, or metal containers of 1,260kg.

**Transportation:** Rubber is transported by all types of transport in covered transporting means in accordance to all rules of cargo's transportation standing at transport of this form.

**Storage:** At a temperature not exceeding 30oC, in dry place free from direct sunlight.

**Guaranteed Shelf Life:** 1 (one) year from the manufacture date. After the expiration of the guaranteed shelf life, the rubber can be used for its intended purpose after confirmation of its conformity to the requirements of this product specification