

## SKI-5D CIS-Isoprene

Synthetic Rubber (Dielectric)

### Specifications

SKI-5D cis-isoprene synthetic rubber is cis-1,4-polyisoprene obtained by polymerization of isoprene in solution using stereospecific catalyst based on neodymium compounds. The rubber is stabilized by staining antioxidant..

- Content of CIS-1,4-units, min: 98 %.
- CAS: # 9003-31-0
- REACH registered.
- Application: for cables and electrically-insulating rubber technical goods manufacturing.

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

- Appearance: briquettes (bales)
- Weight: 30.0+/-1.0 kg
- Colour: from brown to bluish-green, black
- Specific gravity: 0.91-0.92 g/cm<sup>3</sup>

### Technical Requirements:

Parameter	Standard	Test Method
<b>Mooney viscosity ML 1+4 (100°C)*</b>	65-74	ASTM D 1646
<b>Viscosity spread within a batch, units, max*</b>	5	
<b>Volatile matter content, %, max (1 hour)*</b>	0.7	ASTM D 5668
<b>Stearic acid content, %*</b>	0.6-1.4	Method used in the Russian Federation
<b>Ash content, %, max*</b>	0.35	ASTM D 5667
<b>Water-soluble ash content, %, max*</b>	0.08	ASTM D 5667
<b>S789 antioxidant (N-alkyl-Ni-phenyl-p-phenylenediamine) content, %, min*</b>	0.15	Method used in the Russian Federation

Rheometric Properties	Standard	Test Method
ML, dNm**	1.1-2.0	ASTM D 5289
MH, dNm**	11.0-16.0	ASTM D 5289
ts1, min**	1.3-2.7	ASTM D 5289
t'50,min**	3.0-4.5	ASTM D 5289
t'90,min**	5.5-8.0	ASTM D 5289

\* – specified in the certificate of quality.

\*\* – non-rejectable.

Preparation of rubber mixes is carried out in accordance with ASTM D 3403-07, mixing – according to C method (on the roll mills). Roll mills are prepared according to ASTM D 3182-07. Vulcanization characteristics 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	5.00
IRB 7 (N330) carbon black	35.00
Sulphur	2.25
TBBS (N-tert-Butyl-2-benzothiazolesulfenamide)	0.70
Stearic acid	2.00

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 double-layer marked PE film (thickness of 0.05 +/- 0.01 mm, melting temperature of 108-112oC), then – in plastic box pallets of 540kg or in plywood 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:** Under normal conditions of storage (at a temperature not exceeding 30oC, in dry place free from direct sunlight)

**Guaranteed Shelf Life:** 2 (two) years 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