

SPRINTAN™ SLR 6430-SCHKOPAU

SOLUTION-STYRENE BUTADIENE RUBBER (S-SBR)

Composition

SPRINTAN™ SLR 6430-Schkopau is manufactured by anionic solution polymerization using an organo-lithium initiator. In relation to solid rubber the grade is extended with 37.5 parts of TDAE oil which complies with the EU Directive 2005/69/EC for use in tire application. The product has a high styrene/medium vinyl micro structure and a typical glass transition temperature of -36°C. SPRINTAN™ SLR 6430-Schkopau is partially Si-coupled and contains a non-staining stabilizer.

Application

SPRINTAN™ SLR 6430-Schkopau provides high wet grip, improved wear & handling properties combined with excellent low rolling resistance for high performance tire treads.

Packaging

- SPRINTAN™ SLR 6430-Schkopau is supplied in bales of 30 kg nominal weight.
- Bales are wrapped in 50 micron polyethylene film (Vicat softening temperature: 92 °C).
- One box contains forty bales (nominal 1200 kg)

Specification sheet

Raw material specification sheets are available from Trinseo or your local supplier on request.

Handling precautions

- SPRINTAN™ SLR 6430-Schkopau has to be kept away from sources of ignition.
- Reference must be made to the Safety Data Sheet for this product.
- The precautions advised in the Safety Data Sheet should be strictly observed.

Storage

SPRINTAN™ SLR 6430-Schkopau should be stored in an adequately ventilated area where it will not be subjected to direct sunlight or temperatures in excess of 30°C. Under these conditions SPRINTAN™ SLR 6430-Schkopau has a shelf life of at least 12 months.

CHARACTERISTIC PROPERTIES OF SPRINTAN™ SLR 6430-SCHKOPAU

Chemical and Physical Data

Property	Test Method	Unit	Value
Mooney viscosity⁽¹⁾	ASTM D 1646	MU	68.6
Styrene content	SM ⁽²⁾ , (FTIR)	%	40.0
Vinyl content	SM ⁽²⁾ , (FTIR)	%	25.8
Glas transition temperature	DSC (HR 10 K/min, half height)	°C	-36.0
Total extractables	ASTM D 5774	%	27.4
Volatile matter⁽³⁾	ASTM D 5668	%	0.2
Ash	ASTM D 5667	%	0.01
Specific gravity	SM ⁽²⁾	g/cm ³	0.95

(1) ML 1+4 (100 °C) unmassed sample (2) Supplier Method (3) 1 h at 105 °C in a hot air oven, 5 g sample

Test Formulation (based on IRB8 black)

	Parts by Mass
Polymer	100.0
Stearic acid	1.0
Zinc oxide	3.0
Carbon black IRB8	50.0
Sulphur	1.75
Accelerator (TBBS)	1.0

Rheometer^{a) b)}

Property	Test Method	Unit	Value
t_{s2}	ASTM D 5289 ⁽⁴⁾	min	6.8
t_c(50)	ASTM D 5289	min	9.9
t_c(90)	ASTM D 5289	min	15.1
ML	ASTM D 5289	dNm	3.9
MH	ASTM D 5289	dNm	18.3

Vulcanisate Data^{a) b)}

Property	Test Method	Unit	Value
Hardness shA	ASTM D 2240	-	60.3
Rebound resilience	ISO 4662	%	28.4
Tensile strength	ASTM D 412 ⁽⁵⁾	MPa	20.6
Elongation at break	ASTM D 412	%	400.0
Modulus 300%	ASTM D 412	MPa	15.1

(4) Test temperature 160 °C (5) Cure: 45 minutes at 145 °C (a) Material properties are typical properties and do not constitute a sales specification.
(b) All figures are based on the test procedures of the Schkopau test lab.

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