

SPRINTAN™ SLR 4602-SCHKOPAU Solution-styrene butadiene rubber (S-SBR)

COMPOSITION

SPRINTAN™ SLR 4602-Schkopau is manufactured by anionic solution polymerization using an organo-lithium initiator. The product has a medium styrene/high vinyl micro structure and a typical glass transition temperature of -25°C.

SPRINTAN™ SLR 4602-Schkopau is partially coupled and bears a generation 2 functionalization for improved polymer/filler interaction with carbon black as well as with silica. A non-staining stabilizer is added in the production.

APPLICATION

SPRINTAN™ SLR 4602-Schkopau provides outstanding wet grip/rolling resistance for fuel efficient tire treads based on silica and/or carbon black. The high-vinyl micro structure makes SPRINTAN™ SLR 4602-Schkopau applicable in summer, all-season, as well as winter tires.

PACKAGING

- SPRINTAN™ SLR 4602-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 thirty two bales (nominal 960 kg)

SPECIFICATION SHEET

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

HANDLING PRECAUTIONS

- SPRINTAN™ SLR 4602-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 4602-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 4602-Schkopau has a shelf life of at least 12 months.

TECHNICAL DATA SHEET

SYNTHETIC RUBBER

CHARACTERISTIC PROPERTIES OF SPRINTAN™ SLR 4602-SCHKOPAU

Chemical and physical data

Property	Test Method	Unit	Value
Mooney viscosity ⁽¹⁾	ASTM D 1646	MU	63.4
Styrene content	SM ⁽²⁾ , (FTIR)	%	21.1
Vinyl content	SM ⁽²⁾ , (FTIR)	%	62.1
Glas transition temperature	DSC (HR 10 K/min, half height)	°C	-25.0
Volatile matter ⁽³⁾	ASTM D 5668	%	0.2
Ash	ASTM D 5667	%	0.03
Specific gravity	SM ⁽²⁾	g/cm ³	0.93

(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 (ASTM D 3185-6B based on IRB9 black)

Property	Parts by Mass
Polymer	100.0
Stearic acid	1.0
Zinc oxide	3.0
Carbon black IRB9	52.5
TDAE Aromatic oil	5.0
Sulphur	1.75
Accelerator (TBBS)	1.05

Rheometer^{a) b)}

Property	Test Method	Unit	Value
t _{s2}	ASTM D 5289 ⁽⁴⁾	min	7.3
t _c (50)	ASTM D 5289	min	11.3
t _c (90)	ASTM D 5289	min	18.5
ML	ASTM D 5289	dNm	2.4
MH	ASTM D 5289	dNm	19.5

Vulcanisate data^{a) b)}

Property	Test Method	Unit	Value
Tensile strength	ASTM D 412 ⁽⁵⁾	MPa	20.4
Elongation at break	ASTM D 412	%	335.0
Modulus 300%	ASTM D 412	MPa	17.8

(4) Test temperature 160°C (5) Cure: 50 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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