

SBR-1705 TDAE, SBR-1705 Hi-Ar

Synthetic styrene-butadiene rubber

Oil-extended styrene butadiene synthetic rubber SBR-1705 is a styrene (23.5%) and butadiene (76.5%) copolymer obtained by emulsification method with the usage of resin and fatty soaps. The copolymer is filled with oil TDAE or High Aromatic oil (Hi-AR) and stabilized with staining antioxidant.

Appearance: bale of dark-brown color; weight of a bale — 30 ± 1 kg

Package: PE wrapping film (Vicat softening point ≤ 95 °C); metal or plywood containers (1,26 MT) or plastic container 0,54 MT

Shelf life: 2 (two) years from the date of manufacturing

Storage conditions: at the temperature not higher than 30 °C, in place protected from direct sunlight and atmospheric precipitation

Parameters	SBR-1705 TDAE SBR-1705 Hi-Ar grade B	Test method
Mooney viscosity MML ₁₊₄ (100 °C), UM	50 ± 4	ASTM D 1646
Organic acids, % wt	5,0–6,4	ASTM D 5774
Organic acids soap, % wt	≤0,25	ASTM D 5774
Bound styrene, % wt	22,0–25,0	ASTM D 5775
Solvent extract, % wt	19,5–24,5	ASTM D 5774
Oil, % wt	14–17	ASTM D 5774
Volatile matter, % wt	≤0,6	ASTM D 5668
Ash, % wt	≤0,6	ASTM D 5667

Stress-strain properties in standard recipe on ASTM D 3185 (method 1A), 145 °C x 35 min.

Tensile stress at 300% elongation, MPa	≥10,8	
Tensile strength, MPa	≥21,6	ASTM D 412
Ultimate elongation, %	≥400	

Curing characteristics of rubber compound: Rheometer MDR 2000, measurement conditions: 160 °C, deformation of 0.5°, MH at 30 min.

Minimum torque (ML), dNm	1,4–3,4	
Maximum torque (MH), dNm	13,0–20,0	
Scorch time (ts'1), min.	2,5–7,0	ASTM D 5289
Time to 50 % of full cure (t'50), min.	6,5–11,5	
Time to 90 % of full cure (t'90), min.	12,0–20,0	

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