

VECTOR 4113

Styrene-Isoprene-Styrene/Styrene-Isoprene (SIS/SI) Block Copolymer

- SIS triblock / SI diblock (SIS/SI)⁽¹⁾ copolymer blend.
- Contains ~18% SI diblock copolymer.
- Low styrene, low viscosity, low modulus copolymer.
- Outstanding thermal stability and melt processability.
- Supplied as a dense pellet, dusted with talc.
- VECTOR styrenic block copolymers find use under certain regulations as articles or as ingredients in articles intended for food contact or medical applications. Please contact your Dexco Polymers agent for a detailed letter of certification or further information.

VECTOR 4113 is a blend of linear, pure styrene-isoprene-styrene triblock and pure styrene-isoprene diblock copolymer. The individual components are produced via proprietary sequential anionic polymerization technology from Dexco Polymers LP, a Dow/ExxonMobil Venture. It is formulated with the antioxidant TNPP (tris(nonylphenyl) phosphite).

It is a soft SIS/SI block copolymer blend. It is softer than VECTOR 4111A pure triblock copolymer due to the presence of ~18% SI diblock. It is well-suited for use in formulating adhesives.

Properties			
<i>Polymer Properties</i>	Test Method	Unit	Typical Values ⁽²⁾
Styrene	Dexco Method	Wt. %	15
Diblock Content	Dexco Method	Wt. %	18
Melt Flow Rate ⁽³⁾	ASTM D 1238	dg/min	10
Solution Viscosity ⁽⁴⁾	ASTM D 2196	cps	1200
Volatiles	Dexco Method	Wt. %	0.2
Ash	ASTM D 1416	Wt. %	0.3
<i>Physical Properties</i>			
Tensile Strength ⁽⁵⁾	ASTM D 412	PSI (MPa)	3600 (24.8)
300% Modulus ⁽⁵⁾	ASTM D 412	PSI (MPa)	160 (1.1)
Elongation at Break ⁽⁵⁾	ASTM D 412	%	1300
Hardness ⁽⁶⁾	ASTM D 2240	Shore A	31
Specific Gravity	ASTM D 792		0.92

- (1) "SIS/SI" denotes blend of linear styrene-isoprene-styrene triblock copolymer and styrene-isoprene diblock copolymer.
- (2) Typical values, intended only as guides, and should not be construed as specifications.
- (3) Condition 200°C/5 kg.
- (4) 25 Wt. % in toluene at 25°C.
- (5) Tested on roll milled/compression molded plaques (0.035" thick). Tested in the machine direction.
- (6) 1 sec. dwell.

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