VECTOR® 4211A

Styrene Isoprene Styrene Block Copolymer

Dexco Polymers LP

Message:

Styrene-Isoprene-Styrene (SIS) Block Copolymer SIS(1) triblock copolymer.

Contains < 1% diblock copolymer.

Medium styrene, high 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 4211A is a styrene-isoprene-styrene triblock copolymer and is produced via proprietary sequential anionic polymerization technology from Dexco Polymers LP, a Dow/ExxonMobil Venture. It is not formulated with the antioxidant TNPP (tris(nonylphenyl) phosphite).

It is particularly useful in applications requiring a combination of high modulus and high elasticity in film compounds. It is also suited for formulating adhesives for disposables that require high cohesive strength, low creep compliance, and low viscosity at low application temperatures.

General Information				
Features	Copolymer			
	Food Contact Acceptable			
	Good Creep Resistance			
	Good Processability			
	Good Thermal Stability			
	High Elasticity			
	High Strength			
	Low Temperature Resistant			
	Low Viscosity			
Uses	Adhesives			
Forms	Pellets			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	0.938	g/cm³	ASTM D792	
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.3	g/10 min	ASTM D1238	
Solution Viscosity	300	mPa·s	ASTM D2196	
Ash Content	0.2	wt%	ASTM D1416	
Styrene Content	30.0	wt%	Internal Method	
Stress Relaxation ¹				
Peak Force @ 200% strain (A) : 23°C, 889.0 μm	1.52	MPa		
Peak Force @ 500% strain : 23°C, 889.0 μm	5.45	MPa		
Ratio (A:B) : 23°C, 889.0 µm	2.50			
Relaxation @ 200% strain : 23°C, 889.0				
μm	7.2	%		
Set after 500% strain : 23°C, 889.0 μm	13	%		

Unload @ 30% strain : 23°C, 889.0 µm	0.483	МРа	
Unload @ 50% strain (B) : 23°C, 889.0			
μm	0.621	MPa	
Diblock Content	< 1.0	wt%	
Volatiles	0.2	wt%	Internal Method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 1 sec)	62		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ² (300% Strain, 25°C)	4.21	МРа	ASTM D412
Tensile Strength ³ (Yield, 25°C)	26.2	МРа	ASTM D412
Tensile Elongation ⁴ (Break, -4°C)	900	%	ASTM D412
NOTE			
	Described in US 7,445,831 patent.		
	Tested on roll milled/compression		
	molded plaques (0.035" thick).		
	Tested in the transverse direction		
1.	at room temperature.		
2.	25 Wt. % in toluene		
3.	25 Wt. % in toluene		
4.	25 Wt. % in toluene		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

