# VECTOR® 4111A

Styrene Isoprene Styrene Block Copolymer

Dexco Polymers LP

## Message:

VECTOR 4111A
Styrene-Isoprene-Styrene (SIS) Block Copolymer
SIS(1) triblock copolymer.
Contains < 1% diblock copolymer.
Low styrene, 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 4111A is a linear, pure styrene-isoprene-styrene triblock copolymer 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 the softest pure SIS triblock and is highly elastic. It is well-suited for use in elastomeric film compounds and in formulating adhesives.

| General Information | |
|---|---|
| Features | Block Copolymer<br>Food Contact Acceptable<br>Good Processability<br>Good Thermal Stability<br>High Elasticity<br>Soft |
| Uses | Adhesives<br>Compounding<br>Film |
| Forms | Pellets |
| Processing Method | Compounding |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 0.928 | g/cm³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 1.2 | g/10 min | ASTM D1238 |
| Solution Viscosity | 880 | mPa·s | ASTM D2196 |
| Ash Content | 0.3 | wt% | ASTM D1416 |
| Styrene Content | 18.0 | wt% | Internal Method |
| Stress Relaxation [1] | | | |
| Peak Force @ 200% strain (A) : 23°C, 889.0 µm | 1.10 | MPa | |
| Peak Force @ 500% strain : 23°C, 889.0 µm | 2.28 | MPa | |
| Ratio (A:B) : 23°C, 889.0 µm | 2.60 | | |
| Relaxation @ 200% strain : 23°C, 889.0 µm | 6.0 | % | |

| | | | |
|---|---|---|---|
| Set after 500% strain : 23°C, 889.0 µm | 16 | % | |
| Unload @ 50% strain (B) : 23°C, 889.0 µm | 0.414 | MPa | |
| Diblock Content | < 1.0 | wt% | Internal Method |
| Volatiles | 0.2 | wt% | Internal Method |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore A, 1 sec) | 39 | | ASTM D2240 |
| **Elastomers** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Stress [2] (300% Strain, 25°C) | 1.65 | MPa | ASTM D412 |
| Tensile Strength [3] (Yield, 25°C) | 32.4 | MPa | ASTM D412 |
| Tensile Elongation [4] (Break, 25°C) | 1400 | % | ASTM D412 |
| **NOTE** | | | |
| 1. | Described in US 7,445,831 patent. Tested on roll milled/compression molded plaques (0.035" thick). Tested in the transverse direction at room temperature. | | |
| 2. | 25 Wt. % in toluene | | |
| 3. | 25 Wt. % in toluene | | |
| 4. | 25 Wt. % in toluene | | |



## Recommended distributors for this material

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