

Multibase TPSiV™ 3040-85A Thermoplastic Silicone Vulcanizate

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Vulcanizate Elastomer (TPV) , Polyurethane, TP , Silicone, Thermoplastic

Material Notes:

These materials are a novel family of TPV products based on cross-linked silicone rubber dispersed into various engineering thermoplastics. The dispersion of the silicone internal phase is produced by dynamic "vulcanization" or cross-linking of silicone polymers within the thermoplastic organic phase and results in a stable droplet type morphology as shown in the TEM micrograph. TPSiV™ combines the elastomeric performance of silicone rubber with the melt re-processability and thermal and chemical resistance of engineering thermoplastics. Thermoplastic polyurethane based TPSiV™ (3010, 3011, 3111, 3040, 3340 grades) combine the benefits of excellent abrasion resistance from the polyurethane as well as the lower coefficient of friction and improved temperature properties from the silicone rubber. TPSiV™ 3040-55A / 60A / 65A / 70A / 85A: Plasticizer free, these grades are designed for good flow characteristics and a unique "silky" feel. They are used in injection molding applications, specifically overmolding and co-molding on PC and ABS. They exhibit good abrasion resistance, and good retention of properties in harsh environments. They are commonly used in communication devices, computers, and electronic devices. They "set up" quickly in the mold, thus yielding fairly fast cycle times. Information provided by Multibase, a Dow Corning Company

Order this product through the following link:

http://www.lookpolymers.com/polymer_Multibase-TPSiV-3040-85A-Thermoplastic-Silicone-Vulcanizate.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	1.15 g/cc	ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	84	84	10 sec; ASTM D2240
Tensile Strength at Break	11.9 MPa	1730 psi	ASTM D412
Elongation at Break	280 %	280 %	ASTM D412
Tear Strength	50.8 kN/m	290 pli	ASTM D412

Thermal Properties	Metric	English	Comments
Flammability, UL94	HB	HB	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	200 °C	392 °F	
Middle Barrel Temperature	210 °C	410 °F	
Front Barrel Temperature	215 °C	419 °F	
Nozzle Temperature	220 °C	428 °F	
Mold Temperature			

Processing Properties	10.0 - 30.0 °C Metric	50.0 - 86.0 °F English	Comments
Drying Temperature	80.0 °C	176 °F	
Dry Time	2 - 4 hour	2 - 4 hour	

Descriptive Properties	Value	Comments
Injection Rate	Moderate-Fast	

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