

DSM Thermoplastic Elastomers Sarlink® 4380 Thermoplastic Elastomer

Categories: [Polymer](#); [Thermoplastic](#); [Elastomer, TPE](#); [Thermoplastic Olefinic Elastomer \(TPO\)](#)

Material Notes: A highly engineered thermoplastic elastomer for use in demanding applications. Sarlink® 4380 is a flame retardant, medium hardness grade processing exceptional chemical resistance, compression set and high temperature performance. This product can be processed by injection molding or extrusion. Applications include wire and cable insulation, electrical connectors, seals gaskets and boots.

Processing and Handling (See more in property table)

Sarlink® 4380 is a polypropylene based elastomer which can be processed on conventional thermoplastic equipment for injection molding, extrusion and blow molding. This product has a wide processing window in most applications. Melt temperatures from 360°F to 420°F can be used. Do not exceed 430°F. Drying is recommended for extrusion and injection molding and any time the material is used from an unsealed package.

Extrusion screen pack is 20 to 60 mesh.

PURGING

This product has excellent melt stability. Empty the barrel for idle periods of thirty (30) minutes or longer. Purge thoroughly before and after use of this product with polyethylene or polypropylene.

RECYCLING/REGRIND

This product can be reprocessed. Physical properties are generally not degraded. Dry regrind prior to reprocessing.

COLORING

The use of polyolefin based color concentrates is recommended. Apply back pressure in injection molding to disperse color.

BONDING/ASSEMBLY

Thermal bonding techniques can be used to form high strength bonds. Adhesive bonding can be achieved with specialized adhesives. Bond strength is limited due to the polypropylene base of this material.

STORAGE and HANDLING

This product is available in 55 lb. foil lined bags (up to 2,200 lbs. per pallet) or 1,100 lb. polyethylene lined gaylords. It has a storage life at normal temperatures of several years. Please refer to the Material Safety Data Sheet for this grade prior to first time handling.

This data has been provided by Ebbtide Polymers.

Key Words: Thermoplastic Vulcanizate (TPV)

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/in³	ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	82	82	injection molded sample; 5 sec. delay; ASTM D2240
Tensile Strength at Break	7.398 MPa	1073 psi	ASTM D412
Elongation at Break	450 %	450 %	ASTM D412
100% Modulus	0.00360 GPa	0.522 ksi	ASTM D412
Compression Set	44.0 % @Temperature 70.0 °C	44.0 % @Temperature 158 °F	22hr; ASTM D395

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.86 @Frequency 60 Hz	2.86 @Frequency 60 Hz	ASTM D150
Dielectric Strength	21.65 kV/mm	549.9 kV/in	1" electrode in air; ASTM D149
Dissipation Factor	0.0105 @Frequency 60 Hz	0.0105 @Frequency 60 Hz	ASTM D150

Thermal Properties	Metric	English	Comments
Flammability, UL94	V-0 @Thickness 1.20 mm	V-0 @Thickness 0.0472 in	
Oxygen Index	28.2 %	28.2 %	ASTM D2863

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	177 - 204 °C	350 - 400 °F	Injection Molding
	182 - 204 °C	360 - 400 °F	Extrusion
Middle Barrel Temperature	177 - 204 °C	350 - 400 °F	Injection Molding
	182 - 204 °C	360 - 400 °F	Extrusion Transition Zone
	188 - 204 °C	370 - 400 °F	Extrusion Metering Zone
Front Barrel Temperature	177 - 210 °C	350 - 410 °F	Injection Molding
	188 - 204 °C	370 - 400 °F	Extrusion
Nozzle Temperature	199 - 216 °C	390 - 420 °F	Injection Molding
Die Temperature	193 - 210 °C	380 - 410 °F	Extrusion

Melt Temperature	182 - 216 °C	360 - 420 °F	Injection Molding
	193 - 210 °C	380 - 410 °F	Extrusion
Mold Temperature	10.0 - 65.6 °C	50.0 - 150 °F	Injection Molding
Roll Temperature	21.1 - 48.9 °C	70.0 - 120 °F	Extrusion
Drying Temperature	82.2 °C	180 °F	
Dry Time	3 hour	3 hour	
Injection Pressure	0.0689 - 1.03 MPa	10.0 - 150 psi	Injection Molding Back Pressure
Screw Speed	100 - 200 rpm	100 - 200 rpm	Injection Molding