

Teknor Apex Sarlink® 3140 Thermoplastic Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Olefinic Elastomer (TPO)

Material Notes:

A low hardness, multi-purpose thermoplastic elastomer featuring excellent compression set and high temperature performance. Sarlink® 3140 can be processed by injection molding or extrusion for applications such as grips, seals, gaskets, profiles and other articles.

Processing and Handling (See more in property table) Sarlink® 3140 is a polypropylene based elastomer, which can be processed on conventional thermoplastic equipment for injection molding and extrusion. This product has a wide processing window in most applications. Melt temperatures from 360°F to 430°F can be used. Do not exceed 450°F. Drying is recommended for extrusion and blow 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. Sarlink® was sold from DSM to Teknor Apex

Order this product through the following link:

http://www.lookpolymers.com/polymer_Teknor-Apex-Sarlink-3140-Thermoplastic-Elastomer.php

| Physical Properties | Metric | English | Comments |
|---------------------|---|---|------------|
| Density | 0.930 g/cc | 0.0336 lb/in ³ | ASTM D792 |
| Viscosity | 254000 cP | 254000 cP | ASTM D3835 |
| | @Shear Rate 206 1/s, Temperature 200 °C | @Shear Rate 206 1/s, Temperature 392 °F | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|-------------|-----------|---|
| Hardness, Shore A | 40 | 40 | extruded sample; 5 sec. delay; ASTM D2240 |
| | 46 | 46 | injection molded sample; 5 sec. delay; ASTM D2240 |
| Tensile Strength at Break | 2.60 MPa | 377 psi | Die C; Flow direction; ASTM D412 |
| | 3.80 MPa | 551 psi | Die C; Cross direction; ASTM D412 |
| Elongation at Break | 328 % | 328 % | Die C; Flow direction; ASTM D412 |
| | 552 % | 552 % | Die C; Cross direction; ASTM D412 |
| 100% Modulus | 0.00102 GPa | 0.148 ksi | Die C; Cross direction; ASTM D412 |

| Mechanical Properties | 0.00130 GPa Metric | 0.189 ksi English | Die C; Flow direction; ASTM D412 Comments |
|-----------------------|-----------------------|----------------------|--|
| Tear Strength | 16.0 kN/m | 91.3 pli | Die C; Cross direction; ASTM D624 |
| Compression Set | 32 % | 32 % | 22h/23°C; ASTM D395B |
| | 42 % | 42 % | 22hr; ASTM D395B |
| | @Temperature 100 °C | @Temperature 212 °F | |

| Processing Properties | Metric | English | Comments |
|---------------------------|-------------------|----------------|---------------------------------|
| Rear Barrel Temperature | 182 - 204 °C | 360 - 400 °F | Extrusion |
| | 177 - 216 °C | 350 - 420 °F | Injection Molding |
| Middle Barrel Temperature | 182 - 204 °C | 360 - 400 °F | Extrusion Transition Zone |
| | 177 - 216 °C | 350 - 420 °F | Injection Molding |
| | 188 - 210 °C | 370 - 410 °F | Extrusion Metering Zone |
| Front Barrel Temperature | 177 - 216 °C | 350 - 420 °F | Injection Molding |
| | 188 - 210 °C | 370 - 410 °F | Extrusion |
| Nozzle Temperature | 188 - 221 °C | 370 - 430 °F | Injection Molding |
| Die Temperature | 193 - 216 °C | 380 - 420 °F | Extrusion |
| Melt Temperature | 182 - 221 °C | 360 - 430 °F | Injection Molding |
| | 193 - 216 °C | 380 - 420 °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 |

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