

## **Teknor Apex Sarlink® 4370 Thermoplastic Elastomer**

Category: Polymer, Thermoplastic, Elastomer, TPE, Thermoplastic Olefinic Elastomer (TPO), Vinyl (PVC), PVC, Wire and Cable Grade

## **Material Notes:**

A highly engineered thermoplastic elastomer for use in demanding applications. Sarlinkâ® 4370 is a flame retardant, soft hardness grade exhibiting 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) Sarlinkâ® 4370 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 360â°F to 420â°F can be used. Do not exceed 430â°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.PURGINGThis 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/REGRINDThis product can be reprocessed. Physical properties are generally not degraded. Dry regrind prior to reprocessing. COLORINGThe use of polyolefin based color concentrates is recommended. Apply back pressure in injection molding to disperse color.BONDING/ASSEMBLYThermal 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 HANDLINGThis 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.Sarlinkâ® was sold from DSM to Teknor Apex

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Teknor-Apex-Sarlink-4370-Thermoplastic-Elastomer.php

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in³	ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	72	72	injection molded sample; 5 sec. delay; ASTM D2240
Tensile Strength at Break	6.60 MPa	957 psi	ASTM D412
Elongation at Break	500 %	500 %	ASTM D412
100% Modulus	0.00260 GPa	0.377 ksi	ASTM D412
Tear Strength	22.0 kN/m	126 pli	ASTM D624
Compression Set	40 %	40 %	22hr; ASTM D395
	@Temperature 70.0 °C	@Temperature 158 °F	

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-55.0 °C	-67.0 °F	ASTM D2137



Thermal Properties	Metric	English	Comments
Flammability, UL94			
	@Thickness 1.10 mm	@Thickness 0.0433 in	
Oxygen Index	30 %	30 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.5	2.5	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	27.6 kV/mm	701 kV/in	1" electrode in air; ASTM D149
Dissipation Factor	0.0064	0.0064	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Rear Barrel Temperature         177 - 204 ŰC         350 - 400 ŰF         Injection Molding           Middle Barrel Temperature         177 - 204 ŰC         350 - 400 ŰF         Injection Molding           Middle Barrel Temperature         177 - 204 ŰC         350 - 400 ŰF         Extrusion Molding           I 88 - 204 ŰC         370 - 400 ŰF         Extrusion Metering Zone           Front Barrel Temperature         177 - 210 ŰC         350 - 410 ŰF         Injection Molding           Nozzle Temperature         199 - 216 ŰC         370 - 400 ŰF         Extrusion           Nozzle Temperature         199 - 216 ŰC         390 - 420 ŰF         Injection Molding           Die Temperature         193 - 210 ŰC         380 - 410 ŰF         Extrusion           Melt Temperature         182 - 216 ŰC         360 - 420 ŰF         Injection Molding           Mold Temperature         10.0 - 65.6 ŰC         50.0 - 150 ŰF         Extrusion           Mold Temperature         21.1 - 48.9 ŰC         70.0 - 120 ŰF         Extrusion           Dry Time         3 hour         3 hour         Injection Molding Back Pressure           Screw Speed         100 - 200 rpm         100 - 200 rpm         Injection Molding	Processing Properties	Metric	English	Comments
Middle Barrel Temperature         177 - 204 ŰC         350 - 400 ŰF         Injection Molding           182 - 204 ŰC         360 - 400 ŰF         Extrusion Transition Zone           188 - 204 ŰC         370 - 400 ŰF         Extrusion Metering Zone           Front Barrel Temperature         177 - 210 ŰC         350 - 410 ŰF         Injection Molding           Nozzle Temperature         199 - 216 ŰC         370 - 400 ŰF         Extrusion           Nozzle Temperature         199 - 216 ŰC         390 - 420 ŰF         Injection Molding           Die Temperature         193 - 210 ŰC         380 - 410 ŰF         Extrusion           Melt Temperature         182 - 216 ŰC         360 - 420 ŰF         Injection Molding           Mold Temperature         10.0 - 65.6 ŰC         50.0 - 150 ŰF         Extrusion           Mold Temperature         21.1 - 48.9 ŰC         70.0 - 120 ŰF         Extrusion           Drying Temperature         82.2 ŰC         180 ŰF         Extrusion           Injection Molding Back Pressure         10.0 - 150 psi         Injection Molding Back Pressure	Rear Barrel Temperature	177 - 204 °C	350 - 400 °F	Injection Molding
182 - 204 Å*C   360 - 400 Å*F   Extrusion Transition Zone		182 - 204 °C	360 - 400 °F	Extrusion
188 - 204 ŰC   370 - 400 ŰF   Extrusion Metering Zone	Middle Barrel Temperature	177 - 204 °C	350 - 400 °F	Injection Molding
Front Barrel Temperature         177 - 210 ŰC         350 - 410 ŰF         Injection Molding           Nozzle Temperature         199 - 216 ŰC         370 - 400 ŰF         Extrusion           Nozzle Temperature         199 - 216 ŰC         390 - 420 ŰF         Injection Molding           Die Temperature         193 - 210 ŰC         380 - 410 ŰF         Extrusion           Melt Temperature         182 - 216 ŰC         360 - 420 ŰF         Injection Molding           Mold Temperature         10.0 - 65.6 ŰC         50.0 - 150 ŰF         Injection Molding           Roll Temperature         21.1 - 48.9 ŰC         70.0 - 120 ŰF         Extrusion           Drying Temperature         82.2 ŰC         180 ŰF         Extrusion           Dry Time         3 hour         3 hour         Injection Molding Back Pressure		182 - 204 °C	360 - 400 °F	Extrusion Transition Zone
Nozzle Temperature   199 - 216 ŰC   370 - 400 ŰF   Extrusion		188 - 204 °C	370 - 400 °F	Extrusion Metering Zone
Nozzle Temperature         199 - 216 ŰC         390 - 420 ŰF         Injection Molding           Die Temperature         193 - 210 ŰC         380 - 410 ŰF         Extrusion           Melt Temperature         182 - 216 ŰC         360 - 420 ŰF         Injection Molding           Mold Temperature         193 - 210 ŰC         380 - 410 ŰF         Extrusion           Mold Temperature         10.0 - 65.6 ŰC         50.0 - 150 ŰF         Injection Molding           Roll Temperature         21.1 - 48.9 ŰC         70.0 - 120 ŰF         Extrusion           Drying Temperature         82.2 ŰC         180 ŰF           Dry Time         3 hour         3 hour           Injection Molding Back Pressure	Front Barrel Temperature	177 - 210 °C	350 - 410 °F	Injection Molding
Die Temperature         193 - 210 ŰC         380 - 410 ŰF         Extrusion           Melt Temperature         182 - 216 ŰC         360 - 420 ŰF         Injection Molding           Mold Temperature         193 - 210 ŰC         380 - 410 ŰF         Extrusion           Mold Temperature         10.0 - 65.6 ŰC         50.0 - 150 ŰF         Injection Molding           Roll Temperature         21.1 - 48.9 ŰC         70.0 - 120 ŰF         Extrusion           Drying Temperature         82.2 ŰC         180 ŰF           Dry Time         3 hour         3 hour           Injection Pressure         0.0689 - 1.03 MPa         10.0 - 150 psi         Injection Molding Back Pressure		188 - 204 °C	370 - 400 °F	Extrusion
Melt Temperature182 - 216 °C360 - 420 °FInjection Molding193 - 210 °C380 - 410 °FExtrusionMold Temperature10.0 - 65.6 °C50.0 - 150 °FInjection MoldingRoll Temperature21.1 - 48.9 °C70.0 - 120 °FExtrusionDrying Temperature82.2 °C180 °FDry Time3 hour3 hourInjection Pressure0.0689 - 1.03 MPa10.0 - 150 psiInjection Molding Back Pressure	Nozzle Temperature	199 - 216 °C	390 - 420 °F	Injection Molding
193 - 210 °C   380 - 410 °F   Extrusion	Die Temperature	193 - 210 °C	380 - 410 °F	Extrusion
Mold Temperature10.0 - 65.6 °C50.0 - 150 °FInjection MoldingRoll Temperature21.1 - 48.9 °C70.0 - 120 °FExtrusionDrying Temperature82.2 °C180 °FDry Time3 hour3 hourInjection Pressure0.0689 - 1.03 MPa10.0 - 150 psiInjection Molding Back Pressure	Melt Temperature	182 - 216 °C	360 - 420 °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		193 - 210 °C	380 - 410 °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	Mold Temperature	10.0 - 65.6 °C	50.0 - 150 °F	Injection Molding
Dry Time 3 hour 3 hour  Injection Pressure 0.0689 - 1.03 MPa 10.0 - 150 psi Injection Molding Back Pressure	Roll Temperature	21.1 - 48.9 °C	70.0 - 120 °F	Extrusion
Injection Pressure 0.0689 - 1.03 MPa 10.0 - 150 psi Injection Molding Back Pressure	Drying Temperature	82.2 °C	180 °F	
• • • • • • • • • • • • • • • • • • • •	Dry Time	3 hour	3 hour	
Screw Speed 100 - 200 rpm 100 - 200 rpm Injection Molding	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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