Product Data Sheet
Sarlink® 4190

SARLINK® 4190 is a highly engineered Thermoplastic Elastomer for use in demanding applications. SARLINK® 4190 is a medium hardness grade possessing exceptional tensile strength, superior compression set, chemical resistance and high temperature performance. It can be easily processed by injection molding, blow molding or extrusion for various applications such as boots and bellows, seals, gaskets as well as other profiles and articles.

Typical properties*	Test method	S.I.		U.S.	
		Typical value	Units	Typical value	Units
Hardness Shore A (5 sec) Injection molded sample Extruded sample	ASTM D-2240, 5 sec. Delay 5 sec. Delay	 90 86	 -- --	 90 86	 -- --
Specific Gravity	ASTM D-792	0.95	--	0.95	--
Stress/Strain properties Flow direction Tensile strength Modulus at 100% Elongation at break Cross direction Tensile strength Modulus at 100% Elongation at break	ASTM D-412, Die C	 13.0 7.7 524 14.8 6.7 577	 MPa MPa % MPa MPa %	 1885 1117 524 2146 972 577	 Psi Psi % Psi Psi %
Tear Strength Cross direction Unnicked	ASTM D-624, Die C	 71	 kN/m	 405	 Pli
Compression set 32h/23°C 22h/70°C 70h/125°C	ASTM D-395, Method B	 39 40 59	 % % %	 39 40 59	 % % %
Hot air aging 168h/150°C, Cross Direction Change in hardness Retention tensile strength Retention modulus at 100% Retention elongation at break 1000h/135°C, Cross Direction Change in hardness Retention tensile strength Retention modulus at 100% Retention elongation at break	ASTM D-573	 2.6 90 105 83 2 92 110 84	 -- % % % -- % % %	 2.6 90 105 83 2 92 110 84	 -- % % % -- % % %
Volume swell 70h/125°C Oil #3	ASTM D-471	 56	 %	 56	 %
Rheology Apparent Shear Viscosity @ 206 1/s, 200 °C	ASTM D-3835	 360	 Pa.s	 360	 Pa.s

* Tests are conducted on injection molded plaques unless indicated otherwise.

SARLINK® 4190 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 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. Dry three (3) hours at 180°F. Drying is best accomplished in a desiccant dryer.

INJECTION MOULDING CONDITIONS		
Melt temperature		360-430°F
Barrel Temperatures	Rear Middle Front Nozzle	350-420°F 350-420°F 350-420°F 370-430°F
Mould temperature		50-150°F
Screw Speed		100-200 RPM
Back Pressure		10-150 psi
Screw		General Purpose 20:1 L/D ratio

EXTRUSION CONDITIONS		
Melt temperature		380-420°F
Barrel Temperatures	Rear Transition Metering Front Die	360-400°F 360-400°F 370-410°F 370-410°F 380-420°F
Roll Temperature		70-120°F
Screen Pack		20 to 60 mesh
Screw		General Purpose 3:1 compression ratio

PURGING
SARLINK® 4190 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. Drying is best accomplished in a desiccant dryer.

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 & HANDLING
SARLINK® 4190 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.