Sarlink®

Sarlink® 4175

Product Data Sheet

SARLINK® 4000 series are engineered materials designed primarily for demanding automotive applications. Available in both black and natural, SARLINK® 4175 exhibits excellent compression set and flex fatigue, high and low temperature performance. The material can be processed by injection moulding, blow m ould ing and extrusion for applications such as seals, gaskets, chemical resistant hose and tube, boots and bellows. Sarlink® 4175 complies with FDA regulation 21 CFR 177.2600** and can therefore be used for repeated use food packaging and houseware applications such as seals, dispensing valves, gaskets and profiles.

Typical Properties*	Test Method	Typical Value	Units S.I.
Specific gravity	ISO 1183	0.96	g/cm^3
Hardness shore (5 sec) Extruded sample Injection moulded sample	ISO 868	 72 76	
Stress/strain properties Flow direction Modulus 100% Tensile strength Elongation at break Cross direction Modulus 100% Tensile strength Elongation at break	ISO 37 (II)	 4.4 5.3 348 3.1 7.9 671	 MPa MPa % MPa MPa %
Tear strength (Cross direction) trouser Unnicked	 ISO 34 A ISO 34 B (a)	 15 39	 kN/m kN/m
Compression set 72h/23°C 22h/70°C 22h/100°C	ISO 815	 31 41 44	 % % %
Hot air aging 1000h/125°C Change in hardness Retention tensile strength Retention elongation at break 336h/150°C Change in hardness Retention tensile strength Retention elongation at break	ISO 188	 +2 98 95 0 85 80	 pts % % pts % %
Volume swell 72h/100°C water 168h/100°C ASTM oil 1 168h/100°C ref. fuel B	ISO 1817	 +3 +38 +81	 % % %

* Tests are conducted on injection moulded plaques unless indicated otherwise.
** With the exception of contact with foods of type V, low moisture fat and oils, as identified in table 1 of 176.170 (c). This material does not comply with any European food contact regulations.

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Processing & Handling Guide

SARLINK® 4175 is a polypropylene based elastomer which can be processed on conventional thermoplastic equipment for injection moulding, extrusion and blow moulding. This product has a wide processing window in most applications. Melt temperatures from 185ºC to 220ºC can be used. do not exceed 230ºC. Drying is recommended for extrusion and blow moulding (2 hours at 80ºC).

INJECTION MOULDING CONDITIONS		
Melt temperature		185-220°C
Barrel Temperatures	Rear Middle Front Nozzle	180-215°C 180-215°C 180-215°C 187-220°C
Mold Temperature		10-55°FC
Screw Speed		100-200 RPM
Back Pressure		0.1-1 MPa
Screw General Purpose 20:1 L/D ratio		

EXTRUSION CONDITIONS		
Melt temperature		195-215°C
Barrel Temperatures	Rear Transition Metered Front Die	180-200°C 180-205°C 187-210°C 187-210°C 195-215°C
Roll Temperatures		20-50°C
Screen Pack		20 to 60 mesh
Screw General Purpose 3:1 compression ratio		

PURGING
SARLINK® 4175 has excellent melt stability. Empty the barrel for idle periods of 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.

COLOURING
The use of polyolefin based colour concentrates is recommended. Apply back pressure in injection moulding to disperse colour.

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

STORAGE & HANDLING
SARLINK® 4175 is available in 20 kg polyethylene bags (up to 1000 kg per pallet). 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.

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