Product Data Sheet
Sarlink® 4139D

SARLINK® 4000 series are high hardness, multi-purpose thermoplastic elastomers with excellent flex fatigue resistance, heat resistance, improved elasticity and resilience designed primarily for demanding automotive applications. SARLINK® 4139D can be processed by injection molding, extrusion and blow molding to produce clamps, grommets, profiles, boots, bellows and ducts.

Typical properties*	Test method	Typical value	Units S.I.
Specific gravity	ISO 1183	950	Kg/m^3
Hardness shore (5 sec)	ISO 868	40D	
Stress/strain properties	ISO 37 (II)		
Flow direction			
Modulus 100%		11.3	MPa
Tensile strength		15.0	MPa
Elongation at break		638	%
Cross direction			
Modulus 100%		8.6	MPa
Tensile strength		17.8	MPa
Elongation at break		680	%
Tear strength (cross direction)			
Trouser	ISO 34 A	40	kN/m
Unnicked angle	ISO 34 B (a)	97	kN/m
Compression set	ISO 815		
72h/23°C		47	%
22h/70°C		58	%
22h/100°C		72	%
Hot air aging	ISO 188		
1000h/135°C			
Change in hardness		+2	pts
Retention tensile strength		93	%
Retention elongation at break		86	%
336h/150°C			
Change in hardness		+1	pts
Retention tensile strength		101	%
Retention elongation at break		84	%
Volume swell	ISO 1817		
72h/100°C water		+2	%
168h/100°C ASTM oil 1		+9	%
168h/23°C ref. fuel B		+31	%

* Tests are conducted on injection-molded 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.

SARLINK® 4139D complies with FDA regulation 21 CFR 177.2600** and can therefore be used for repeated use food packaging and house ware applications such as seals, dispensing valves, gaskets and profiles.

SARLINK® 4139D 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 185°C to 220°C can be used. Do not exceed 260°C. Drying is recommended for extrusion and blow molding (3 hours at 80°C). Drying is best accomplished in a desiccant dryer.

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
Mould temperature		10-55°C
Screw Speed		100-200 RPM
Back Pressure		0.1-1 MPa
Screw	General Purpose	

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

PURGING
SARLINK® 4139D 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. Drying is best accomplished in a desiccant dryer.

COLOURING
The use of polyolefin based color concentrates is recommended. Apply backpressure 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. Adhesive bond strength is limited due to the polypropylene base of this material.

STORAGE & HANDLING
SARLINK® 4139D is available in 20 kg polyethylene bags (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.