

Thermoplastic Elastomers for (drinking) water applications

Sarlink 3400 series grades exemplify both our curiosity and discipline in research, and care and dedication in production. Our engineers have succeeded in creating a product range that feels like rubber yet processes easily like plastic. Sarlink 3400 is based on dynamically vulcanized rubber in a polypropylene matrix, which combines superb elastic properties with the processing ease of thermoplastics.

A wide variety of water applications

Sarlink 3400 series is your best choice for beverage, cold and hot water applications when you need a soft touch grip or an elastic seal with an excellent long term performance. The products in this range offer special design opportunities to produce integrated parts and/or reduce solution costs.

We have developed the 3400 product line for beverage and (drinking) water applications such as liners can covers, water stops, home plumbing, laundry gaskets, tubing for food appliances and hoses for industrial water (or other liquids).

We are the experts in high quality TPV production and practical application support. You are the expert on your applications. Together we can develop an endless range of possibilities, many yet to be explored. Whatever your intended purpose is, using Sarlink in the manufacturing process will optimize the quality of your performance. We have a long experience in product safety aspects of these applications and will be happy to help you with our knowledge.

Main Characteristics

The compounds of the Sarlink 3400 series combine flexibility and elastic properties (like low tension and compression set) with good flex fatigue and long term stability (thermal,

UV and ozone). The products have excellent fluid resistance over a wide temperature range. Our compounds can be processed using standard thermoplastic processing techniques such as injection molding, extrusion and blow molding. As a result, total system costs are lower than for traditional thermoset rubber solutions. The Sarlink 3400 series contains a wide variety of grades with hardnesses from Shore A 45 to shore A 90, in black and natural colors.

Safety and regulatory requirements

This product line meets the NSF 61 (ANSI) and NSF 51(ANSI) requirements, a standard which addresses crucial aspects of drinking water and beverage system components: the level of contaminants that leach or migrate from the material and get in touch with the drinking water or beverage should not exceed acceptable levels in finished waters. Using applications that meet these standards implicates for manufacturers that they can bypass some or all chemical testing and assures that finished products meet all requirements. More and detailed information about NSF 51 or NSF 61 information and the complete list of actual Sarlink product approvals can be downloaded from www.nsf.org.

Other Sarlink Products

Other Sarlink grade series exist, each with a specialty set of properties designed to fit a variety of application requirements. In addition to standard Sarlink series, special Sarlink grades exist or can be developed to meet unique customer requirements, such as specific OEM or regulatory approval requirements, UV resistance, or potable water contact. Information regarding these specialty grades and other Sarlink series are available via your Sarlink representative or on www.sarlink.com.

Data Sarlink 3400 general purpose grades			Date of last modification : 06-Jan-10					
Typical properties	Test standard	Units S.I.	3440	3450	3460	3470	3480	3490
Density	ISO 1183	kg/m ³	930	950	950	950	950	940
Hardness (5 sec delay)	ISO 868	Shore A or D						
Extruded sample			42A	55A	64A	70A	81A	90A
Injection molded sample			47A	57A	67A	74A	85A	93A
Tensile properties	ISO 37							
<i>Flow direction</i>								
Tensile strength at break		MPa	2,4	4,2	5,4	6,6	8,7	12,3
Modulus at 100% elongation		MPa	2,4	2,9	3,7	5	6,8	10,2
Elongation at break		%	215	235	280	290	335	400
<i>Cross flow direction</i>								
Tensile strength at break		MPa	4,3	5,2	6,4	7,6	9,5	13,7
Modulus at 100% elongation		MPa	1,2	1,8	2,6	3,4	4,6	6,7
Elongation at break		%	620	590	650	660	710	720
Tear strength (cross flow)	ISO 34 B							
Unnicked angle		kN/m	17	23	33	43	52	82
Compression set	ISO 815							
22 hrs @ 23°C		%	19	21	24	26	33	47
22 hrs @ 70°C		%	30	33	36	41	52	60
70 hrs @ 125°C		%	51	52	57	64	67	76
Hot air aging (cross flow direction)	ISO 188							
<i>168 hrs @ 150°C</i>								
Change in hardness		pts	2	3	3	4	3	3
Retention tensile strength at break		%	115	110	100	100	90	100
Retention modulus at 100% elongation		%	110	105	110	110	110	110
Retention elongation at break		%	110	110	90	90	85	90
<i>1000 hrs @ 135°C</i>								
Change in hardness		pts	-2	2	2	0	1	-1
Retention tensile strength at break		%	110	90	100	90	90	90
Retention modulus at 100% elongation		%	105	110	100	110	120	110
Retention elongation at break		%	110	90	95	90	85	85
Volume swell	ISO 1817							
70 hrs @ 125°C in IRM 903 oil		%	130	130	125	120	100	70
Apparent shear viscosity	ISO 11443							
@ 206 1/s, 200°C	Capillary	Pa.s	260	275	300	300	300	300

Some grades may not be available locally



Stretching innovations

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About Sarlink

Sarlink is a global brand of premium quality pelletized thermoplastic vulcanizates (TPVs). A specialist in developing and manufacturing high quality TPVs to offer customers the material properties they need, such as flexibility, durability and low compression set. The products are produced under the highest production standards. Sold and distributed by a dedicated and service-driven sales force. And supported by an expert application development. Sarlink adds value by being a specialist in high quality TPV solutions and offering a support structure based on close partnership. Sarlink is a truly global company with production operations and laboratories in Leominster MA (USA) and Genk (Belgium), and sales/marketing and technical support

offices in Rochester Hills MI (USA), Leominster MA (USA), Sittard-Geleen (The Netherlands), Shanghai (China) and Singapore.

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