

Combining the Advantages of Thermoplastic Processing and Elastomeric Performance

Sarlink 4100 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 4100 is based on dynamically vulcanized rubber in a polypropylene matrix, which combines superb elastic properties with the processing ease of thermoplastics.

High Material Efficiency

Sarlink is the environmentally friendly equivalent to general purpose thermoset rubber compounds, with high chemical resistance comparable to general purpose polychloroprene rubber compounds. This is unique combination enables a broad range of applications.

Compared to thermoset rubber, using Sarlink will reduce production costs due to its shorter cycle times, reduced energy needs, and a very high material efficiency as a result of its recyclability.

Main Characteristics

The compounds of the Sarlink 4100 series combine chemical and abrasion resistance with high tensile properties and excellent elastic properties such as low tension and compression sets.

Our compounds can be processed using standard thermoplastic processing techniques such as injection molding, extrusion and blow molding. The Sarlink 4100 series contains a wide variety of grades with hardnesses from 45 Shore A up to 50 Shore D, in black and natural colors.

Safety

Sarlink does not present a toxic hazard through skin contact or inhalation when handled under normal conditions. Contact with molten polymers or inhalation of fumes should be avoided during processing. More and detailed information can be downloaded from www.sarlink.com.

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 4100 general purpose grades (ISO standards - typical properties)

Date of last modification: 1-Aug-08

Typical properties	Test standard	Units S.I.	4145	4155	4165	4175	4180	4190	4139D	4149D
Density	ISO 1183	kg/m ³	960	960	960	960	960	950	950	940
Hardness (5 sec delay)	ISO 868	Shore A or D								
Extruded sample			45A	53A	63A	72A	79A	86A	39D	47D
Injection molded sample			48A	56A	65A	75A	83A	90A	40D	51D
Tensile properties	ISO 37									
<i>Flow direction</i>										
Tensile strength at break		MPa	3,1	4,3	5,8	7,2	9,0	13,6	18,0	21,6
Modulus at 100% elongation		MPa	2,6	3,1	4,2	5,3	6,8	10,2	13,3	18,0
Elongation at break		%	180	240	280	300	330	380	420	420
<i>Cross flow direction</i>										
Tensile strength at break		MPa	4,3	5,2	6,8	8,5	10,2	14,5	19,0	23,1
Modulus at 100% elongation		MPa	1,3	2,0	2,5	3,3	4,5	6,7	8,9	13,0
Elongation at break		%	550	550	570	590	620	650	700	740
Tear strength (cross flow)	ISO 34B									
Unnicked angle		kN/m	20	22	29	39	48	71	97	141
Compression set	ISO 815									
22 hrs@23°C		%	11	14	17	22	26	36	46	55
22 hrs@70°C		%	26	26	27	31	40	48	56	64
70 hrs@125°C		%	35	37	40	45	58	72	80	85
Hot air aging (cross flow direction)	ISO 188									
<i>168 hrs@150°C</i>										
Change in hardness		pts	0	2	2	3	2	3	2	2
Retention tensile strength at break		%	95	91	89	91	90	92	85	85
Retention modulus at 100% elongation		%	97	98	100	103	105	110	115	115
Retention elongation at break		%	106	94	89	84	85	83	80	80
<i>1000 hrs@135°C</i>										
Change in hardness		pts	2	2	2	2	3	3	2	2
Retention tensile strength at break		%	98	95	91	98	91	89	85	92
Retention modulus at 100% elongation		%	100	102	104	105	110	115	120	125
Retention elongation at break		%	113	101	92	95	85	84	80	80
Volume swell	ISO 1817									
70 hrs@125°C in IRM 903 oil		%	112	85	83	78	64	54	47	38
Apparent shear viscosity	ISO 11443									
@206 1/s, 200°C	Capillary	Pa.s	320	320	340	340	340	340	370	440

Some grades may not be available locally


Stretching innovations
Americas (all enquiries)

Telephone: +1.978.534.1010
 Toll Free (USA only): 800.524.0120
 Fax: +1.978.534.1005

Europe (all enquiries)

Telephone: +31.46.477.3362
 Fax: +31.46.476.1050

Singapore

Commercial Enquiry : + 65-63936120
 Fax: + 65-62995848

China

Commercial Enquiry: + 86-13601793834
 Technical Enquiry: + 86-15921993719

Japan

Commercial Enquiry: +81-352095151

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 Southfield MI (USA), Leominster MA (USA), Sittard (The Netherlands), Shanghai (China) and Singapore.

All information supplied by or on behalf of DSM in relation to its products whether in the nature of data, recommendations or otherwise, is supported by research and believed reliable, but DSM assumes no liability whatsoever in respect of application, processing or use made of the aforementioned information of products, or any consequence thereof. The buyer undertakes aforementioned information or product, whose quality and other properties he shall verify, or any consequences thereof. No liability whatsoever shall attach to DSM for any infringement of the rights owned or controlled by a third party in intellectual, industrial or other property by reason of the application, processing or use of the aforementioned information or products by the buyer. © Sarlink is a registered trademark of DSM. Names and trademarks used in recipes or information refer to the owner of the respective trademarks and/or names of their products. DSM disclaims any rights regarding these trademarks and/or names.

info@sarlink.com
www.sarlink.com