



















### Injection moulding grades

			Sofprene T® 5402.A30	Sofprene T® 5402.A40	Sofprene T® 5402.A45	Sofprene T® 5402.A50	Sofprene T® 5402.A55	Sofprene T® 5402.A60	Sofprene T® 5402.A65	Sofprene T® 5402.A70	Sofprene T® 5402.A75	Sofprene T® 5402.A80	Sofprene T® 5402.A85	Sofprene T® 5402.A90
<i>Physical properties</i>	<i>Method</i>	<i>Unit</i>												
<b>hardness 3"</b>	ASTM D2240	Shore	A 30	A 40	A 44	A 50	A 55	A 60	A 65	A 70	A 76	A 81	A 85	A 90
<b>density</b>	ASTM D792	g/cm <sup>3</sup>	1.04	1.04	1.04	1.06	1.04	1.04	1.05	1.04	1.03	1.04	1.04	1.03
<b>tensile strength</b>	ASTM D412-C	MPa	1.9	3.5	3.9	4.3	4.2	4.0	4.4	4.4	4.8	5.6	6.0	6.6
<b>elongation at break</b>	ASTM D412-C	%	720	840	830	790	750	680	670	620	590	580	540	510
<b>modulus 100%</b>	ASTM D412-C	MPa	0.8	0.7	0.9	1.1	1.3	1.6	1.8	2.2	2.6	3.0	3.6	4.4
<b>tear strength</b>	ASTM D624-C	kN/m	21	18	19	23	22	23	26	26	29	32	35	40

### Injection moulding, high fluidity grades

			Sofprene T® 5405.A50	Sofprene T® 5405.A55	Sofprene T® 5405.A60	Sofprene T® 5405.A65	Sofprene T® 5405.A70	Sofprene T® 5420.A85	Sofprene T® 5420.A90	Sofprene T® 5420.A96
<i>Physical properties</i>	<i>Method</i>	<i>Unit</i>								
<b>hardness 3"</b>	ASTM D2240	Shore	A 52	A 56	A 61	A 66	A 70	A 86	A 90	A 96
<b>density</b>	ASTM D792	g/cm <sup>3</sup>	0.96	0.95	0.97	0.97	0.96	1.07	1.05	1.07
<b>tensile strength</b>	ASTM D412-C	MPa	4.3	3.8	4.0	3.8	4.8	6.2	6.8	10.0
<b>elongation at break</b>	ASTM D412-C	%	810	740	670	540	610	620	550	600
<b>modulus 100%</b>	ASTM D412-C	MPa	1.2	1.7	1.7	2.0	2.3	3.9	4.8	7.1
<b>tear strength</b>	ASTM D624-C	kN/m	23	24	24	24	32	40	44	56

### Injection moulding, economical series

			Sofprene T® 5501.A40	Sofprene T® 5501.A45	Sofprene T® 5501.A55	Sofprene T® 5501.A60	Sofprene T® 5501.A65	Sofprene T® 5501.A70	Sofprene T® 5501.A75	Sofprene T® 5501.A80
<i>Physical properties</i>	<i>Method</i>	<i>Unit</i>								
<b>hardness 3"</b>	ASTM D2240	Shore	A 40	A 45	A 55	A 60	A 66	A 71	A 75	A 80
<b>density</b>	ASTM D792	g/cm <sup>3</sup>	1.16	1.17	1.18	1.16	1.16	1.17	1.16	1.15
<b>tensile strength</b>	ASTM D412-C	MPa	1.3	1.5	1.6	1.6	2.0	2.3	2.5	2.6
<b>elongation at break</b>	ASTM D412-C	%	520	520	420	370	380	450	350	330
<b>modulus 100%</b>	ASTM D412-C	MPa	0.7	0.8	1.2	1.4	1.6	1.7	2.0	2.2
<b>tear strength</b>	ASTM D624-C	kN/m	9	12	11	14	16	18	22	17

### Chemical structure

The Forflex® thermoplastic elastomer family consists of heterophasic compounds based on an amorphous elastomeric phase and a crystalline phase, usually both of a polyolefinic nature. This chemical composition confers elastic properties to finished products up to a temperature of 70 - 80 °C. These compounds are classified as TPOs.

### Characteristics

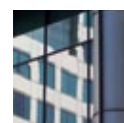
- Good weather resistance
- Excellent electrical insulation properties
- Low density (from 0.89 g/cm<sup>3</sup>)
- Excellent elastic properties at low temperatures
- Excellent colorability
- Adhesion on PP and polyolefin based materials
- Standard grades for injection moulding and extrusion
- Food-contact grades

### Application



#### Automotive

Arch wheels, mudguards, mats



#### Building

Window gaskets co-extruded with soft TPEs



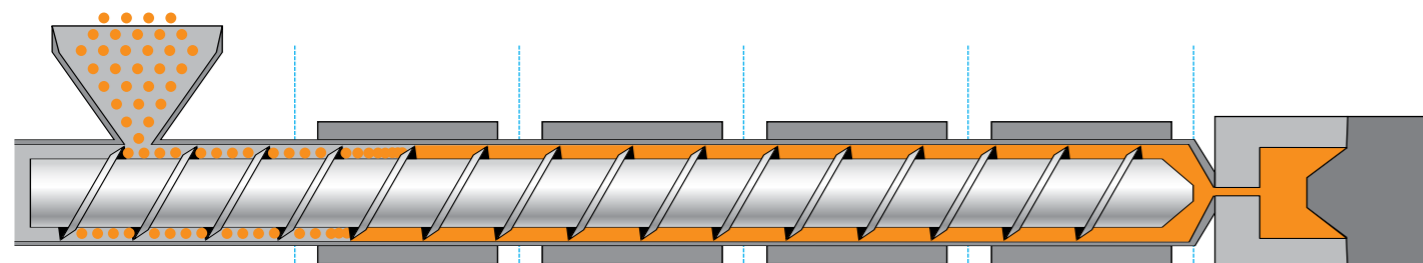
#### Sport and leisure

Ski boots, flippers

### Processing conditions

Injection moulding	
drying	usually not necessary
plasticizing screw	polyolefin type screw
screw L/D ratio	≥ 20
screw compression ratio	2.5:1 ÷ 3.5:1
plasticizing speed	high
injection speed	high
injection pressure	medium
runners	having circular section and gradually decreasing flow-through diameter
injection points	Ø ≥ 0.7 mm we recommend not using injection points having a diameter <0.3 mm without prior selection of the appropriate grades, to be agreed with SO.F.TER. Technical Support
mould air vents	0.03 ÷ 0.05 mm
Shrinkage	
shrinkage	from 0.4% to 1.5% depending on the hardness
Extrusion	
drying	usually not necessary
plasticizing screw	polyolefin type screw
screw L/D ratio	≥ 20
screw compression ratio	≥ 2.5
die land	<10 mm
breaker plate	60 Mesh

### Indicative processing temperatures (°C)



Injection moulding	1st Zone	2nd Zone	3rd Zone	Nozzle	Mould
hardness < 85 ShA	160	170	180	190	20 - 40
hardness > 85 ShA	170	190	200	210	20 - 40
Extrusion / blow moulding	1st Zone	2nd Zone	3rd Zone	Head	
hardness < 90 ShA	160	170	190	170	
hardness > 90 ShA	180	210	220	210	

