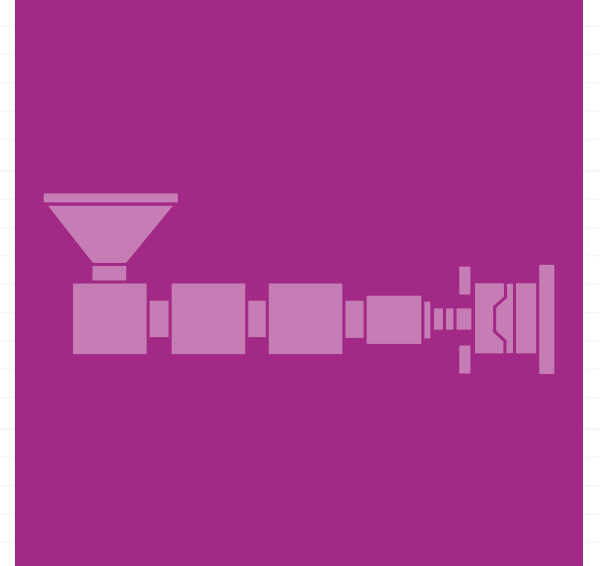


Dryflex[®] SE

Standard TPE range, optimised for injection moulding



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INTRODUCTION

Dryflex SE is our standard TPE range. It is extremely adaptable and can be used in a wide range of applications. The compounds are easy to process and are optimised for injection moulding.

In this guide we show typical properties for our most common grades, these tables are not exhaustive and by no means list all available properties and materials. Our aim is to supply a material that precisely matches application requirements and where an existing grade cannot satisfy the specific demands of your application, we have the proven expertise to customise a material that will.

Please use this guide as an introduction to our **Dryflex SE** range and [contact us](#) to discuss your specific requirements.

KEY PROPERTIES

- Unfilled, semi-filled & filled series
- 30 to 90 Shore A hardnesses
- Translucent, black, natural or coloured compounds are available
- Good adhesion to PP & PE
- High flexibility
- Easy processing via injection moulding
- Good mechanical properties
- Applications with food contact are possible
- Service temperature range from -50°C to 125°C (unstressed)
- Conforms to European directives 2002/95/EC (RoHS) & 2003/11/EC
- 100% recyclable

DRYFLEX SE : UNFILLED SERIES

The Dryflex SE unfilled series is favourable when translucency and good scratch resistance are required, as well as when there are high surface finish requirements.

The material enables an easy and secure pigmenting. Unfilled grades have excellent flow and mechanical properties. The low density results in lower weight compared to the filled and semi-filled series.

Dryflex SE unfilled compounds are available in hardness from 30 to 90 Shore A in natural and black colours but they can easily be coloured.

DRYFLEX SE : UNFILLED SERIES

Grade	Hardness ¹ ISO 868 Shore A	Density ISO 2781 g/cm ³	Tensile Strength ² ISO 37 Type 1 MPa	Stress at 100% Strain ² ISO 37 Type 1 MPa	Stress at 300% Strain ² ISO 37 Type 1 MPa	Elongation at Break ² ISO 37 Type 1 %	Tear Strength ² ISO 34-1 Method C N/mm	CS 23°C / 72h ISO 815-1 Type B %	CS 70°C / 22h ISO 815-1 Type B %	CS 100°C / 22h ISO 815-1 Type B %
Dryflex SE 30A001	30	0.89	7.0	0.6	1.2	>850	13.4	14	30	56
Dryflex SE 35A001	35	0.89	7.6	0.7	1.3	>900	14.4	16	35	56
Dryflex SE 40A001	40	0.89	7.9	0.9	1.5	>900	15.5	21	35	58
Dryflex SE 45A001	45	0.89	8.1	1.2	1.8	>900	18.0	21	35	59
Dryflex SE 50A001	50	0.89	8.5	1.3	2.0	>850	19.6	23	36	59
Dryflex SE 55A001	55	0.89	9.0	1.6	2.3	>850	19.8	24	38	59
Dryflex SE 60A001	60	0.89	10.1	2.0	2.8	>850	24.5	26	42	63
Dryflex SE 65A001	65	0.89	10.3	2.1	2.9	>850	25.3	28	44	66
Dryflex SE 70A001	70	0.89	10.5	2.2	3.0	>800	29.3	31	47	69
Dryflex SE 75A001	75	0.89	10.9	2.5	3.5	>800	30.5	31	50	70
Dryflex SE 80A001	80	0.89	11.2	3.5	4.5	>700	36.8	39	56	74
Dryflex SE 85A001	85	0.89	11.8	4.2	5.2	>700	42.5	40	57	75
Dryflex SE 90A001	90	0.89	15.2	4.9	6.0	>700	50.5	41	61	76

¹ After 15 seconds

² Across the flow direction

DRYFLEX SE : FILLED SERIES

The most significant features of the Dryflex SE filled series are an improved heat stability.

A filled material reduces the stickiness and sink marks on thick details but has limited scratch resistance.

The filled grades generally allow for fast demoulding and shorter cycle times.

Compounds in the Dryflex SE filled series are available in hardness from 30 to 90 Shore A in natural and black colours but they can easily be coloured.

DRYFLEX SE : FILLED SERIES

Grade	Hardness ¹ ISO 868 Shore A	Density ISO 2781 g/cm ³	Tensile Strength ² ISO 37 Type 1 MPa	Stress at 100% Strain ² ISO 37 Type 1 MPa	Stress at 300% Strain ² ISO 37 Type 1 MPa	Elongation at Break ² ISO 37 Type 1 %	Tear Strength ² ISO 34-1 Method C N/mm	CS 23°C / 72h ISO 815-1 Type B %	CS 70°C / 22h ISO 815-1 Type B %	CS 100°C / 22h ISO 815-1 Type B %
Dryflex SE 30A301	30	1.18	3.4	0.7	1.3	>700	18.2	10	30	63
Dryflex SE 35A301	35	1.18	4.1	0.8	1.5	>700	18.6	10	30	63
Dryflex SE 40A301	40	1.18	5.5	0.9	1.5	>750	18.8	12	30	66
Dryflex SE 45A301	45	1.18	5.8	1.1	1.6	>850	19.0	12	30	66
Dryflex SE 50A301	50	1.18	6.0	1.2	1.8	>850	19.1	18	34	68
Dryflex SE 55A301	55	1.18	6.8	1.3	1.9	>860	19.3	19	38	68
Dryflex SE 60A301	60	1.18	7.0	1.4	2.0	>800	19.4	23	41	69
Dryflex SE 65A301	65	1.18	7.1	1.7	2.3	>800	21.6	25	44	70
Dryflex SE 70A301	70	1.18	8.0	2.0	2.8	>750	22.7	29	47	70
Dryflex SE 75A301	75	1.18	8.4	2.3	3.0	>750	24.3	36	48	70
Dryflex SE 80A301	80	1.18	8.8	2.7	3.6	>750	30.8	37	51	71
Dryflex SE 85A301	85	1.18	9.4	3.0	3.9	>700	32.0	41	56	71
Dryflex SE 90A301	90	1.18	10.5	3.6	4.6	>650	38.6	45	60	72

¹ After 15 seconds

² Across the flow direction

DRYFLEX SE : SEMI-FILLED SERIES

The Dryflex SE semi-filled series is recommended when the properties of the produced detail requires the advantages of the unfilled series in combination with the filled series. A semi-filled material can therefore combine the advantages of the other two series.

The material has good flow and mechanical properties as well as reasonable scratch resistance.

Compounds in the Dryflex SE semi-filled series are available in hardness from 30 to 90 Shore A in natural and black colours but they can easily be coloured.

DRYFLEX SE : SEMI-FILLED SERIES

Grade	Hardness ¹ ISO 868 Shore A	Density ISO 2781 g/cm ³	Tensile Strength ² ISO 37 Type 1 MPa	Stress at 100% Strain ² ISO 37 Type 1 MPa	Stress at 300% Strain ² ISO 37 Type 1 MPa	Elongation at Break ² ISO 37 Type 1 %	Tear Strength ² ISO 34-1 Method C N/mm	CS 23°C / 72h ISO 815-1 Type B %	CS 70°C / 22h ISO 815-1 Type B %	CS 100°C / 22h ISO 815-1 Type B %
Dryflex SE 30A201	30	1.0	7.0	0.6	1.1	>850	17.2	14	28	61
Dryflex SE 35A201	35	1.0	7.5	0.8	1.4	>850	18.0	14	32	61
Dryflex SE 40A201	40	1.0	7.7	0.9	1.6	>850	18.8	17	35	62
Dryflex SE 45A201	45	1.0	7.8	1.2	1.9	>850	19.0	17	36	62
Dryflex SE 50A201	50	1.0	8.2	1.4	2.1	>850	19.5	18	37	62
Dryflex SE 55A201	55	1.0	8.6	1.5	2.2	>850	20.1	21	38	62
Dryflex SE 60A201	60	1.0	9.0	1.6	2.4	>850	21.3	22	40	64
Dryflex SE 65A201	65	1.0	9.3	1.8	2.6	>850	22.8	24	40	68
Dryflex SE 70A201	70	1.0	9.4	2.4	3.3	>750	26.3	29	47	68
Dryflex SE 75A201	75	1.0	9.9	2.9	3.8	>750	29.3	31	48	70
Dryflex SE 80A201	80	1.0	11.3	3.4	4.4	>750	33.1	37	53	70
Dryflex SE 85A201	85	1.0	12.3	3.7	4.7	>750	37.4	39	53	74
Dryflex SE 90A201	90	1.0	14.9	4.7	5.9	>750	47.0	43	60	74

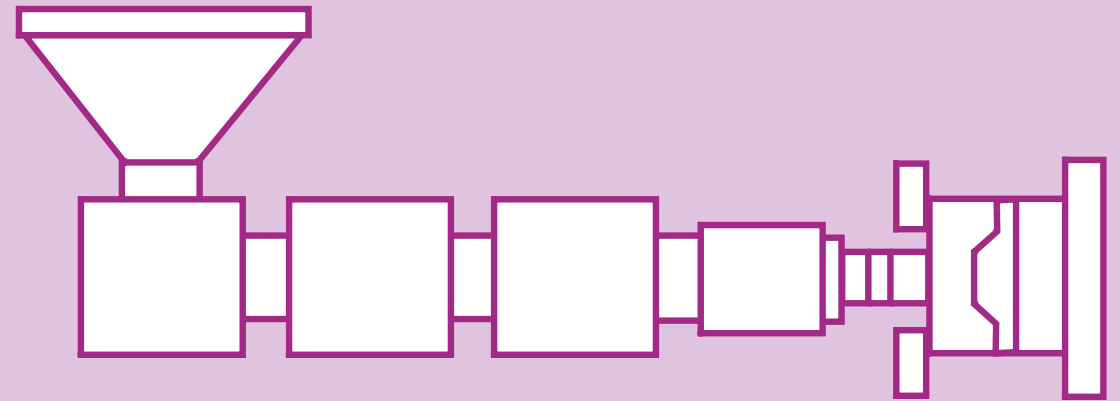
¹ After 15 seconds

² Across the flow direction

PROCESSING

Dryflex SE TPE compounds can be processed using standard thermoplastic processing methods, they are optimised for injection moulding.

Injection Speed:	Medium - Fast
Injection Pressure:	Medium - Fast
Back Pressure:	Low - Medium
Holding Pressure:	Sufficient to pack the mould
Cooling:	Can be demoulded when parts have cooled sufficiently



Recommended start-up temperatures °C

170 - 190

180 - 200

190 - 210

200 - 220

15 - 50

PROCESSING

Dryflex SE grades can be processed without predrying when stored under normal conditions. If poor surface finish, bubbles, voids or streaks are seen on the finished article then material should be dried for 2 to 3 hours at 80°C. Cycle times will be governed by temperature and section thickness.

Temperatures should not exceed 260°C and the compound should only be at elevated temperatures for a short period of time. Care must be taken to allow sufficient cooling of the section prior to demoulding in order to prevent permanent distortion of the article.

This processing information is intended only as a guide. The actual parameters will depend on the machine used and the moulding being produced.

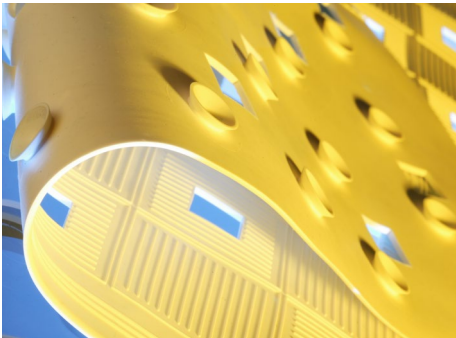


Further TPE processing & problem solving information is available to download from our website

APPLICATIONS

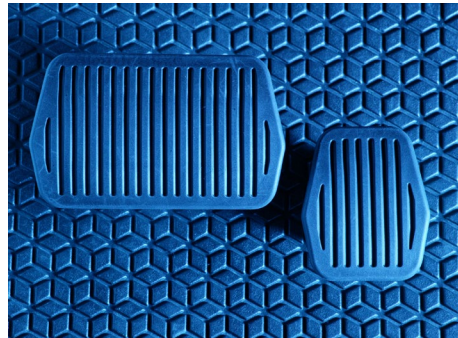
Dryflex SE grades can be used in a wide variety of applications in the consumer, automotive, construction & industrial markets, with new applications being introduced every day. Examples include soft touch grips & handles, sealing for packaging, sports equipment, toys, infant care, tools and automotive components.

APPLICATION STUDY : CONSUMER GOODS



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APPLICATION STUDY : AUTOMOTIVE PEDAL



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APPLICATION STUDY : SPORTS BOTTLE CAP



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APPLICATION STUDY : CHILD DRINKING CUP



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Or, simply send us an email to info@hexpolTPE.com

ABOUT HEXPOL TPE



HEXPOL TPE is a global compounding group specialising in Thermoplastic Elastomers (TPE) for key industries such as consumer, medical, packaging, automotive and construction. We have a core belief in being the easiest company to do business with. That's why we invest in our operations, teams and technologies to offer our customers the most reliable, relevant and cost-effective TPE compounds, backed by highly responsive support, technical know-how and application expertise. Our teams work together, across boundaries, applying the knowledge, experience and talents we have all around the world to meet the needs of our customers.

All the information about chemical and physical properties consists of values measured in tests on injection moulded test specimens. We provide written and illustrated advice in good faith. This should only be regarded as being advisory and does not absolve the customers from doing their own full-scale tests to determine the suitability of the material for the intended applications. You assume all risk and liability arising from your use of the information and/or use or handling of any product. Figures are indicative and can vary depending on the specific grade selected and the production site. HEXPOL TPE makes no representations, guarantees, or warranties of any kind with respect to the information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. We retain the right to make changes without prior notice. HEXPOL TPE makes no warranties or guarantees, express or implied, respecting suitability of HEXPOL TPE's products for your process or end-use application. Dryflex® is a registered trademark, property of the HEXPOL TPE group of companies.