

# Dryflex<sup>®</sup> Touch

TPE compounds with superior haptics



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# INTRODUCTION

**Dryflex Touch** is a range of Thermoplastic Elastomers (TPEs) designed to give a superior silky feeling and touchably soft sensation. They were also formulated with durability and product aesthetics in mind, with grades that offer vibrant colour options, UV and scratch resistance.

Several grades have been developed with properties designed for applications such as wearable technology, wrist straps, consumer electronics, protective cases, cosmetics, grips and packaging.

In this guide we show typical properties for our most common grades, these tables do not list all available properties and materials. Our aim is to supply a material that precisely matches application requirements, please use this guide as an introduction to our **Dryflex Touch** range of TPEs and [contact us](#) to discuss your specific requirements.

# KEY PROPERTIES

- Superior haptics with a silky smooth feel
- Skin contact compatibility
- Non-sticky, easy to clean
- Latex, silicone, PVC & oil-free grades are available
- Range of hardness from 50 to 90 Shore A
- Adhesion to several substrates including PP, PE, ABS, PC & TPU
- Includes grades that are produced from raw materials compliant with food contact regulations<sup>1</sup>
- 100% recyclable
- Standard grades are supplied in natural & black, but Dryflex Touch TPEs can easily be coloured
- Efficient processing via injection moulding & multi-component methods
- Good scratch resistance

<sup>1</sup> Food contact statements are available on request

# PRODUCT SAFETY

Alongside functionality and aesthetics, comfort and product safety are also key requirements, particularly for products that are in direct skin contact. For Dryflex Touch TPEs we have considered the following:

**MEDIA RESISTANCE** : Representative Dryflex Touch grades have been tested for resistance to perspiration and various skin products. Please find further details on the following page.

**SKIN COMPATIBILITY** : Representative Dryflex Touch grades have been tested in accordance with ISO 10993-10:2010 for skin sensitization. They were shown to have no sensitization potential and classified as a non-sensitizer. They have also passed in vitro cytotoxicity tests according to ISO 10993-5:2009.

**FOOD CONTACT** : The Dryflex Touch SF3 series is produced from raw materials that are compliant with food contact regulations. Food contact statements are available on request.

# MEDIA RESISTANCE

Representative Dryflex Touch grades have been tested for resistance to perspiration and various skin products. Samples were immersed in various media at 23°C and 65°C for 7 days. Please note that results can vary depending on the hardness. Please [contact us](#) for more detailed information.

SERIES	PERSPIRATION	BODY CREAMS / LOTIONS
Dryflex Touch SF2 series	Very Good	Very Good
Dryflex Touch SF3 series	Excellent	Excellent

# Dryflex Touch : series overview

	Dryflex Touch : SF2 series	Dryflex Touch : SF3 series
<b>Hardness Range</b>	60 to 80 Shore A	50 to 90 Shore A
<b>Aesthetics</b>	Silky feel	Velvety smooth feel
<b>Adhesion</b>	ABS, PC, TPU	PP, PE
<b>Special Characteristics</b>	Good UV resistance PVC and latex free	Raw materials are compliant with food contact regulations <sup>1</sup> PVC, latex and silicone free Oil-free Good UV resistance
<b>Typical Applications</b>	Consumer electronics and wearable technology Packaging	Grips and handles with a superior touch
<b>Link to Grade Table</b>	<a href="#">SF2 series →</a>	<a href="#">SF3 series →</a>

<sup>1</sup> Food contact statements are available on request

# Dryflex Touch : SF2 series

The Dryflex Touch SF2 series has a silky feel.

These grades can be overmoulded onto ABS, PC & TPU in multi-component applications.

Grade	Hardness <sup>1</sup> ISO 868 Shore A	Density ISO 2781 g/cm <sup>3</sup>	Tensile Strength <sup>2</sup> ISO 37 Type 1 MPa	Stress at 100% Strain <sup>2</sup> ISO 37 Type 1 MPa	Elongation at Break <sup>2</sup> ISO 37 Type 1 %	Tear Strength <sup>2</sup> ISO 34-1 Method C N/mm	CS 23°C / 72h ISO 815-1 Type B %
Dryflex SF2 60A201	60	1.04	3.7	2.4	>350	22	32
Dryflex SF2 70A201	70	1.03	5.2	3.0	>400	30	24
Dryflex SF2 80A201	80	1.04	6.1	4.2	>350	36	30

<sup>1</sup> After 15 seconds

<sup>2</sup> Across the flow direction



# Dryflex Touch : SF3 series

The Dryflex Touch SF3 series offers a velvety smooth feel. They are produced from raw materials which are compliant with food contact regulations<sup>3</sup>. These grades are oil and silicone free, with adhesion to PP and PE.

Grade	Hardness <sup>1</sup> ISO 868 Shore A	Density ISO 2781 g/cm <sup>3</sup>	Tensile Strength <sup>2</sup> ISO 37 Type 1 MPa	Stress at 100% Strain <sup>2</sup> ISO 37 Type 1 MPa	Elongation at Break <sup>2</sup> ISO 37 Type 1 %	Tear Strength <sup>2</sup> ISO 34-1 Method C N/mm	CS 23°C / 72h ISO 815-1 Type B %
Dryflex SF3 50A001	50	0.94	10.4	1.4	>650	39	25
Dryflex SF3 70A001	70	0.94	10.0	3.9	>550	47	38
Dryflex SF3 90A001	90	0.94	10.4	7.2	>450	67	58

<sup>1</sup> After 15 seconds

<sup>2</sup> Across the flow direction

<sup>3</sup> Food contact statements are available upon request

# TYPICAL APPLICATIONS

Typical applications for Dryflex Touch TPEs include wearable technology, consumer electronics, smartphone and tablet protective cases, wrist straps, grips and packaging.

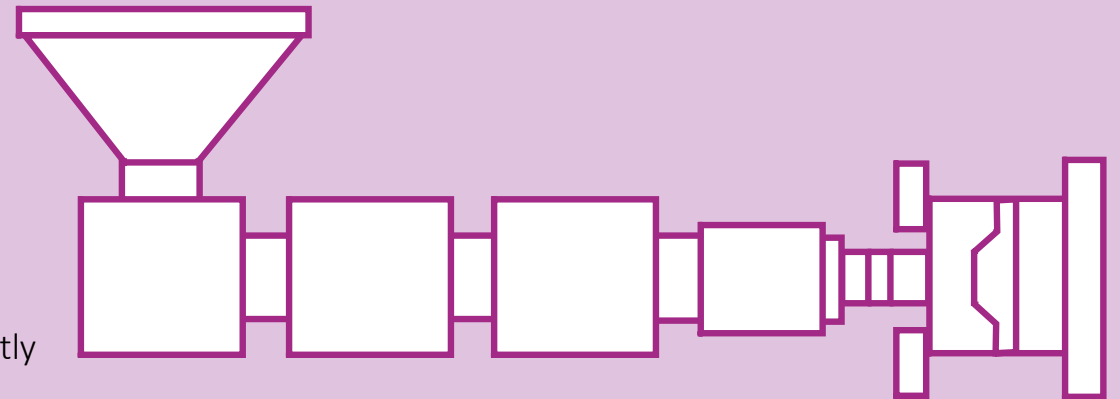
Anywhere you want to add some soft-touch appeal and brand differentiation.



# PROCESSING

Dryflex Touch TPE compounds can be processed using conventional thermoplastic fabricating methods such as injection moulding. They are also suitable for multi-component processing such as 2K and insert moulding.

Injection Speed:	Low - Medium
Injection Pressure:	Low - Medium
Back Pressure:	Low - Medium
Holding Pressure:	High
Predrying:	Recommended for SF2 series
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 Touch SF3 series can be processed without predrying when stored under normal conditions. Predrying is recommended for the SF2 series. Material should be dried for 2 to 3 hours at 80°C, this will also help if poor surface finish, bubbles, voids or streaks are seen on the finished article. Cycle times will be governed by temperature and section thickness.

Temperatures should not exceed 230°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

# CONTACT US

If you can't see what you're looking for or have any questions, please get in touch. Click the button to find your local contact from our global network of plants, offices and distribution partners.

Or, simply send us an email to [info@hexpolTPE.com](mailto: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.

