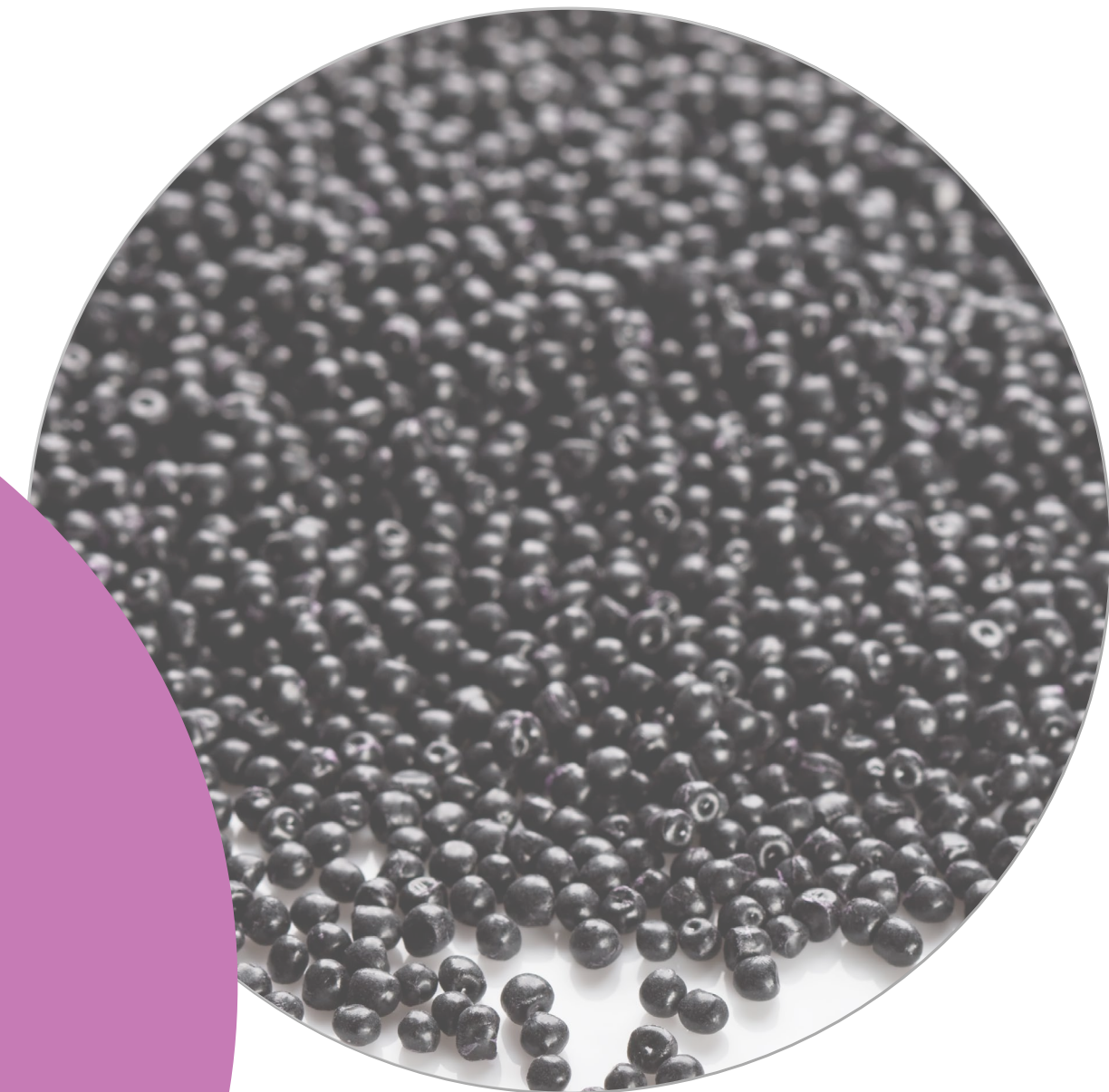
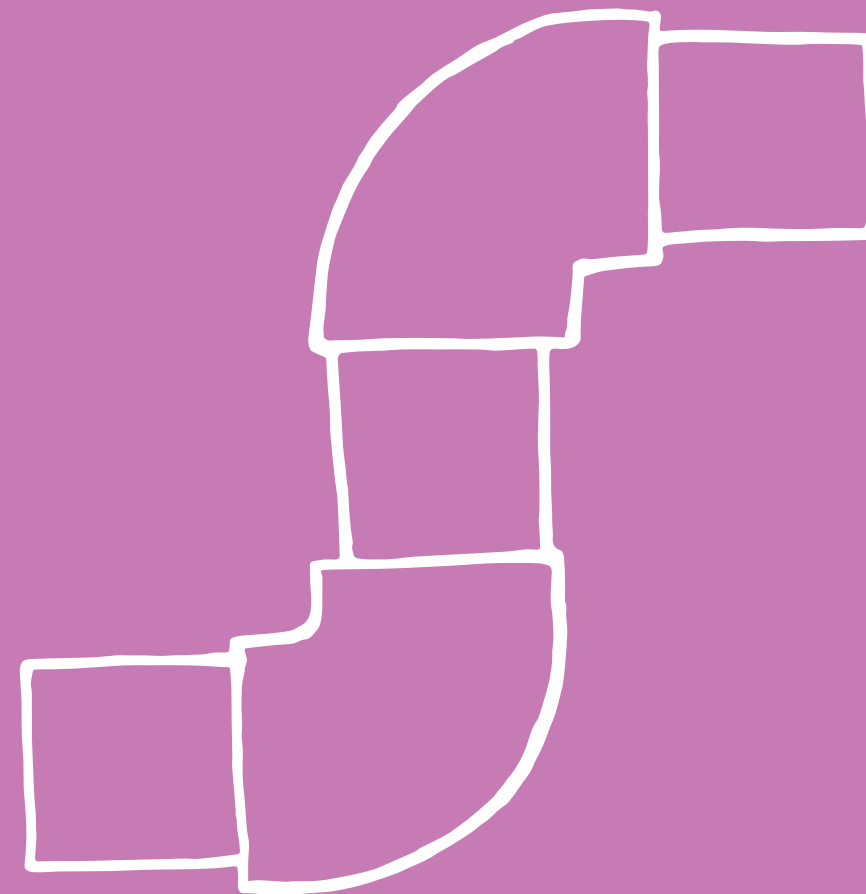
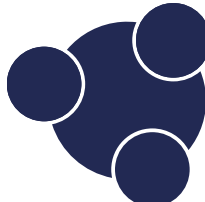


A Material Difference

Dryflex[®] PS

Thermoplastic Elastomer (TPE)
Materials for Pipe Joint Seals



 **HEXPOL[®]**
TPE

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Introduction + Key Properties

Dryflex PS is a range of thermoplastic elastomer (TPE) materials designed for seals and pipe joints used in waste water applications

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 the Dryflex PS range of TPEs and [**contact us**](#) to discuss your specific requirements.

Key Properties

- Meets the requirements of EN 681-2:2000
- 50, 60 and 70 IRHD Hardnesses
- Easy to colour
- Service temperature range from -50 to 120°C
- Recyclable in closed-loop systems and production waste can be reprocessed
- Good UV and ozone resistance
- Process via extrusion or injection moulding

Product Assurance + EN 681-2:2000

We support our customers by proving the performance of our products via relevant testing and working with industry standards. The Dryflex PS grades meet the requirements of EN 681-2:2000, the European Standard EN 681-2, Type WT.

This testing allows our customers to be confident that the materials meet the necessary requirements for sealing of waste water systems by conforming to recognised industry standards.

The EN 681-2:2000 standard specifies requirements for TPE materials used for moulded seals used in joints of:

- Thermoplastic piping systems for non-pressure waste water discharge (intermittent flow up to 95°C) inside buildings
- Thermoplastic piping systems for non-pressure underground drainage and sewerage (continuous flow up to 45°C and intermittent flow up to 95°C)
- Thermoplastic rainwater systems

The EN 681-2:2000 standard sets physical property requirements based on three hardness classifications; 50, 60 and 70 IRHD. In the tables on the following pages you will find the properties for the Dryflex PS grades. We have also included the tolerances specified in the standard.

Dryflex PS TPE : 50 IRHD Hardness

Grade	Hardness		Density ISO 2781 g/cm3	Tensile Strength ISO 37 Type 1 MPa		Elongation at Break ISO 37 Type 1 %		Compression Set ISO 815-1 Type B %			Ageing 7 Days at 70°C			Stress Relaxation ISO 3384 %		Volume Change	
	IRHD ISO 48	Shore A ¹ ISO 868		In Flow	Across Flow	In Flow	Across Flow	72 Hours at 23°C	24 Hours at 70°C	72 Hours at -10°C	Hardness Change IRHD ISO 48	Tensile Strength Change ISO 37 %	Elongation Change ISO 37 %	7 days at 23°C	100 days at 23°C	Water (7 days at 70°C) ISO 1817 %	Ozone Resistance ISO 1731-1 %
Dryflex PS 50R201B	50	46	1.05	4	8	> 750	> 850	15	36	58	2	4.5	4	15	21	1	no cracking
Standard ²	50 +/-5	-	-	3	-	300	-	25	40	65	+/-5	+/-10	+/-15	19	28	+8/-1	no cracking

¹ After 15 seconds
² Requirements for EN 681-2:2000 standard

Dryflex PS TPE : 60 IRHD Hardness

Grade	Hardness		Density ISO 2781 g/cm3	Tensile Strength ISO 37 Type 1 MPa		Elongation at Break ISO 37 Type 1 %		Compression Set ISO 815-1 Type B %			Ageing 7 Days at 70°C			Stress Relaxation ISO 3384 %		Volume Change	
	IRHD ISO 48	Shore A ¹ ISO 868		In Flow	Across Flow	In Flow	Across Flow	72 Hours at 23°C	24 Hours at 70°C	72 Hours at -10°C	Hardness Change IRHD ISO 48	Tensile Strength Change ISO 37 %	Elongation Change ISO 37 %	7 days at 23°C	100 days at 23°C	Water (7 days at 70°C) ISO 1817 %	Ozone Resistance ISO 1731-1 %
Dryflex PS 60R201B	60	51	1.05	4.5	9.5	> 650	> 800	22	34	60	1	1	3	21	29	1	no cracking
Standard ²	60 +/-5	-	-	4	-	300	-	25	40	65	+/-5	+/-10	+/-15	29	32	+8/-1	no cracking

¹ After 15 seconds
² Requirements for EN 681-2:2000 standard

Dryflex PS TPE : 70 IRHD Hardness

Grade	Hardness		Density ISO 2781 g/cm3	Tensile Strength ISO 37 Type 1 MPa		Elongation at Break ISO 37 Type 1 %		Compression Set ISO 815-1 Type B %			Ageing 7 Days at 70°C			Stress Relaxation ISO 3384 %		Volume Change	
	IRHD ISO 48	Shore A ¹ ISO 868		In Flow	Across Flow	In Flow	Across Flow	72 Hours at 23°C	24 Hours at 70°C	72 Hours at -10°C	Hardness Change IRHD ISO 48	Tensile Strength Change ISO 37 %	Elongation Change ISO 37 %	7 days at 23°C	100 days at 23°C	Water (7 days at 70°C) ISO 1817 %	Ozone Resistance ISO 1731-1 %
Dryflex PS 70R201B	70	59	1.05	5.5	10	> 550	> 800	23	36	60	1	7	-2	21	29	1	no cracking
Standard ²	70 +/-5	-	-	5	-	300	-	25	40	65	+/-5	+/-10	+/-15	24	35	+8/-1	no cracking

¹ After 15 seconds
² Requirements for EN 681-2:2000 standard

Processing

Dryflex PS TPEs 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. Care must be taken to allow sufficient cooling of the section prior to demoulding in order to prevent permanent distortion of the article.

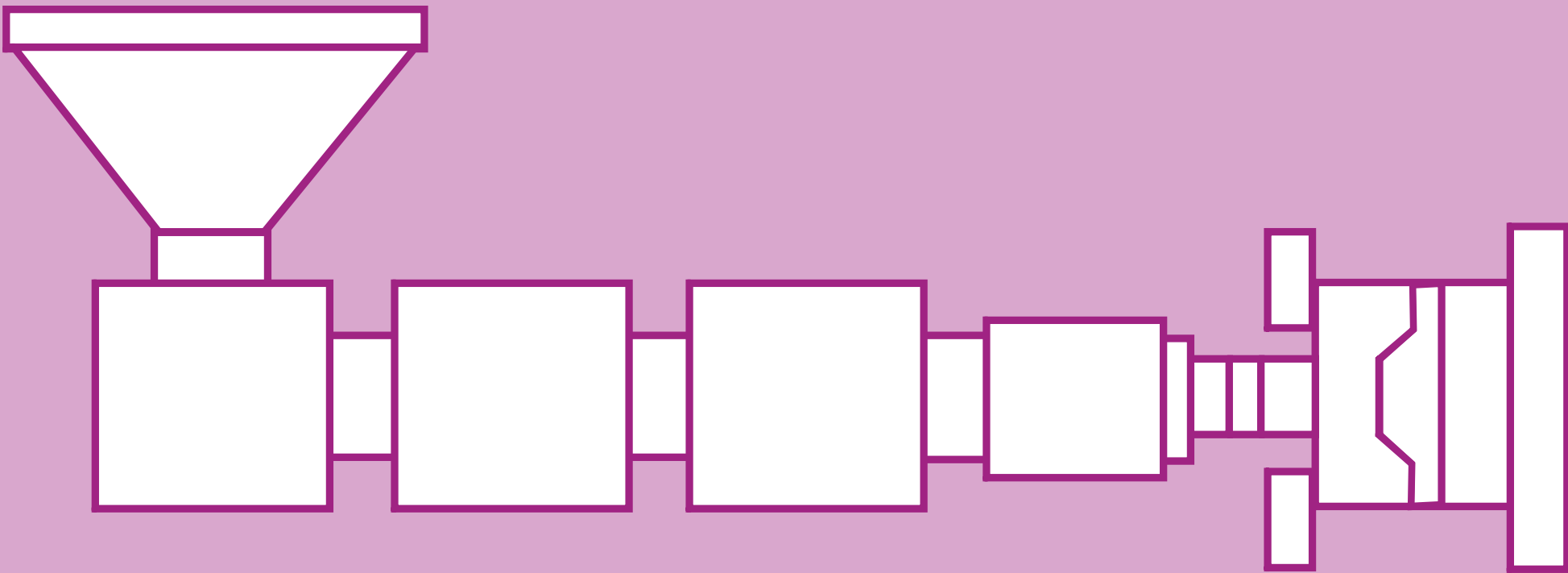
Venting of extrusion lines may be used as a method of preventing the build up of volatiles during continuous processing.

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

[More Processing & Problem Solving Information >](#)

Processing : Injection Moulding Guidelines

- 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

180 - 190 190 - 200 200 - 210 210 - 220 15 - 50

More Dryflex TPE Ranges

Click for more information

Dryflex® 2K 2K	Dryflex® AM 	Dryflex® Antimicrobial 	Dryflex® C 	Dryflex® Circular 
Dryflex® CS 	Dryflex® DW 	Dryflex® Flam 	Dryflex® Green 	Dryflex® HiF 
Dryflex® Interior VOC 	Dryflex® SE 	Dryflex® T 	Dryflex® Touch 	Dryflex® TPV TPV

ABOUT US



info@hexpolTPE.com | www.hexpolTPE.com

80,000+
T/P.A. CAPACITY

Across our Sweden, UK, German, China & North America operations. [Our companies](#)

50+
YEARS HISTORY

We've a proud history in flexible polymer compounding & were among the **1st to produce TPEs** in Europe. [About us](#)

34,795+
FORMULATIONS

A comprehensive portfolio in TPE, TPS, TPO, TPU, TPV, soft PVC & Biobased technologies. Learn more about [Our products](#)

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