Dryflex® DW

TPEs for drinking water applications

HEXPOL TPE

CONTENTS

INTRODUCTION

When our water supply goes on its journey to our taps, we don't want its quality to be impaired by unwanted odours, colours or flavours. We also want to help safeguard against any microbial contamination along the way.

We have developed Dryflex DW, a special range of Thermoplastic Elastomers (TPE) especially for applications that come into contact, either directly or indirectly, with drinking water. This can include both domestic and commercial applications such as plumbing seals, pipe fittings and shower-heads. Dryflex DW TPEs have passed the German drinking water regulations KTW as well as W270 approval.

In this eGuide we give an overview of the typical properties for some of the Dryflex DW TPE compounds, however, this does not list all available properties and materials. Please use this guide as an introduction to our Dryflex DW range and contact us to discuss your specific requirements.

KEY PROPERTIES

- Tested and approved for W270 and KTW guidelines for cold and warm water (23°C / 60°C)
- Raw materials compliant with food contact regulation (EU) No 10/2011
- Hardness range from 50 to 90 Shore A
- Available in natural and black, as well as custom colours with compliance certificate
- No microbial growth according to W270, without the use of biocides
- Easy to process via injection moulding or extrusion
- Adhesion to PP and PE for multi-component applications

CERTIFICATIONS

In developing the Dryflex DW TPE compounds, we carefully selected the raw materials to ensure they are compliant with food contact and water hygiene standards.

Dryflex DW TPE compounds have been tested and approved according to 'The Guideline for hygienic Assessment of Organic Materials in Contact with Drinking Water' (KTW Guideline →).

The Dryflex DW TPE compounds have also been approved according to DVGW Technical Standard W270 → which describes a test method to determine the microbial growth on non-metallic materials intended for use in drinking water systems.

→ PLEASE CLICK HERE TO DOWNLOAD THE KTW AND W270 CERTIFICATES

DRYFLEX DW : TYPICAL PROPERTIES

Grade	Hardness [1] ISO 868 Shore A	Colour	Density ISO 2781 g/cm3	Tensile Strength [2] ISO 37 Type 2 MPa	Stress at 100% Strain [2] ISO 37 Type 2 MPa	Stress at 300% Strain [2] ISO 37 Type 2 MPa	Elongation at Break [2] ISO 37 Type 2 %	Tear Strength [2] ISO 34-1 Method C N/mm	CS 23°C / 72h ISO 815-1 Type B %
Dryflex DW 50A001N L	50	Natural	0.89	16.1	1.1	1.9	833	22.6	21
Dryflex DW 55A001N L	55	Natural	0.89	17.2	1.4	2.4	828	29.2	22
Dryflex DW 60A001N L	60	Natural	0.89	17.3	1.5	2.5	837	34.5	23
Dryflex DW 65A001N L	65	Natural	0.89	19.7	1.9	3.1	843	36.0	18
Dryflex DW 70A001N L	70	Natural	0.89	19.7	2.5	3.8	831	49.2	18
Dryflex DW 75A001N L	75	Natural	0.89	20.3	3.2	4.6	859	54.4	23
Dryflex DW 80A001N L	80	Natural	0.89	23.4	4.2	5.6	815	57.4	28
Dryflex DW 85A001N L	85	Natural	0.89	21.6	4.6	6.1	811	56.4	32
Dryflex DW 90A001N L	90	Natural	0.89	21.3	5.7	7.1	850	64.0	34

[1] After 15 seconds

[2] Across the flow direction

TYPICAL APPLICATIONS

Dryflex DW TPE compounds can be used in both domestic and commercial applications such as :

- Plumbing seals
- Pipe fittings
- Shower-heads

PROCESSING

Dryflex DW 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.

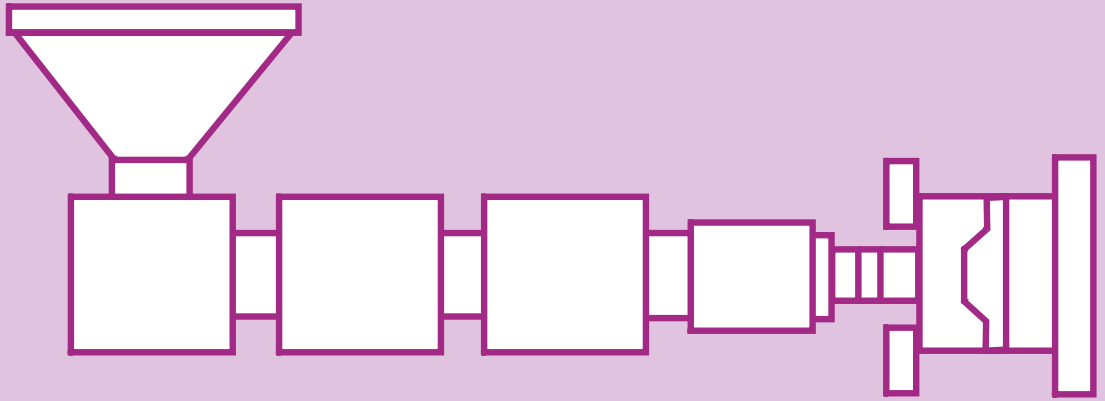
Temperatures should not exceed 240°C and the compound should only be at elevated temperatures for a short period of time. Care must be taken to allow sufficient cooling of the section prior to demoulding in order to prevent permanent distortion of the article.

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

INJECTION MOULDING

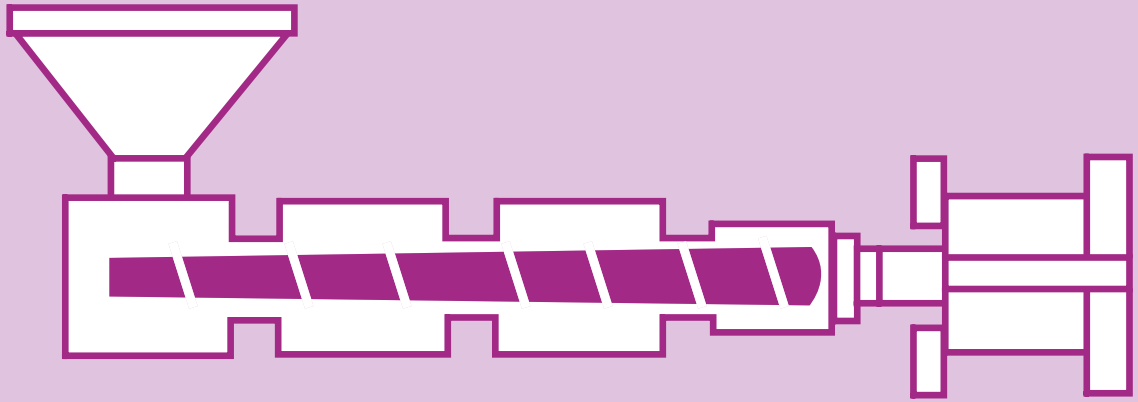
Injection Speed:	Low - Medium
Back Pressure:	Low - Medium
Holding Pressure:	Sufficient to pack the mould
Cooling:	Can be demoulded when parts have cooled sufficiently



Recommended start-up temperatures °C	170 - 190	180 - 200	190 - 210	200 - 210	15 - 60

EXTRUSION

L/D Ration:	20:1 - 25:1
Compression Ratio:	2.5 - 3.0
Breaker Plate/Screen:	Both should be used
Draw Down:	5 - 10%
Cooling:	Cold water bath



Recommended start-up temperatures °C	150 - 160	160 - 170	170 - 180	180 - 190	180 - 200

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

GLOBAL CONTACTS →

PRODUCT WEBPAGE →

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.

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