KRAIBURG TPE

Datasheet

DW/H Series

THERMOLAST® K

The DW/H Series is your material solution for hoses in contact with drinking water. The compounds are approved in accordance with all relevant European drinking water standards – , W270, KTW, WRAS, ACS.

Typical applications

- Hoses for food application
- Hoses for household appliances
- Shower hoses

Material advantages

- Alternative material to PVC-P
- Easy coloring (compounds in natural colors)
- Easy to extrude
- Excellent kinking performance
- FDA - Code of Federal Regulations (CFR), Title 21
- Precolored with all approvals
- Recyclable
- Regulation (EU) No 10/2011
- Smooth surface and repels dirt and lime deposit
- WRAS, W270, ACS and KTW approved

Processing Method: Extrusion, Injection Molding

	Color / RAL DESIGN	Hardness DIN ISO 7619-1 ShoreA	Density DIN EN ISO 1183-1 g/cm3	Tensile Strength [1] DIN 53504/ISO 37 MPa	Elongation at Break [1] DIN 53504/ISO 37 %
TF5WHA	translucent	55	0.900	15.0	700
TF6WHA	translucent	65	0.900	15.0	700
TF6WHB	translucent	60	0.900	15.0	700
TF7WHA	translucent	75	0.900	15.0	700
TF7WHB	translucent	70	0.900	15.0	700
TF8WHA	translucent	85	0.900	17.0	700
TF8WHB	translucent	80	0.900	16.0	700

[1] Deviating from ISO 37 standard test piece S2 is tested with a traverse speed of 200 mm/min.

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- WRAS (BS 6920) for cold- and warm water applications in natural color and colored - W270 in natural color and colored - Compliance regarding ACS DGS/VS4 2000/232 dated 27.4.2000, DGS/VS4 n° 99/217 dated 04/12/1999 - KTW guideline for 23 °C and 60 °C (or transition regulation of UBA from 04/21/2012 for cold water 73 °F (23 °C) and warm water 140 °F (60 °C)

All values published in this data sheet are rounded average values.

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Processing Guideline Injection Molding	
Cylinder temperature	180 - 190 - 200 °C, max. 235 °C (360 - 370 - 390 °F, max. 445 °F)
Hotrunner	Hot runner temperatures: 200 - 235 °C (390 - 455 °F). The runner should be empty after a maximum of 2 - 3 shots.
Injection pressure	200 - 1000 bar (2900 - 14504 psi) (depending on the size and weight of the part).
Injection rate	In general, the fill time should not be more than 1–2 seconds.
Hold pressure	We recommend to derive the optimum hold pressure from determining the solidification point, starting with 40 % - 60 % of the required injection pressure.
Back pressure	20 - 100 bar; if color batches are used, higher back pressure is necessary.
Screw retraction	If an open nozzle is used processing with screw retraction is advisable.
Mold temperature	25 - 40 °C (77 - 104 °F) The use of mold release agents can have an influence on the microbiological resistance.
Predrying	Pre drying of the material is not necessary; if surface moisture forms as a result of changes in temperature, the material should be dried for 2 - 4 hours at 60°C (140° F).
Needle valve	With materials < 50 Shore A the use of a needle valve is advisable.
Screw geometry	Standard 3-zone polyolefine screw.
Residence time	The residence time is to be set as short as possible with a maximum of 10 minutes.
Cleaning recommendation	For cleaning and purging of the machine it is appropriate to use polypropylene or polyethylene. Machine must be PVC-free.

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Processing Guideline Extrusion	
Cylinder temperature	160 - 180 - 200 °C; max. 235 °C (320 - 360 - 390 °F; max. 455 °F).
Screw geometry	Standard three-zone screw (e.g. polyolefin screw). The screw must be able to provide sufficient shearing.
L/D ratio	At least 25
Compression ratio	At least 3.5 : 1
Screens / breaker plate	A breaker plate and a screen pack are generally recommended in the extruder configuration in order to increase pressure.
Die land	<= 3 mm (<= 0,12 in.)
Extruder Head	Ca. 200 °C (390 °F)
Die temperature	Ca. 200 - 230 °C (390 - 450 °F)
Predrying	Pre drying of the material is not necessary; if surface moisture forms as a result of changes in temperature, the material should be dried for 2 - 4 hours at 60 - 80 °C (140 - 175 °F).
Calibration	Generally not necessary; support elements may be required when extruding THERMOLAST® compounds with high hardness or when coextruding with standard thermoplastics.
Cleaning recommendation	For cleaning and purging of the machine it is appropriate to use polypropylene or polyethylene. Machine must be PVC-free.