

FC/ht Series

THERMOLAST® K

The FC/ht Series is your highly transparent material solution for applications with food contact. The series is characterized, among other things, by its excellent adhesion to PP.

Typical applications

- Function and design elements
- Grip applications
- Household articles
- Packaging (for food and careproducts)
- Razors
- Seals
- Toothbrushes
- Toys

Material advantages

- Adhesion to PP
- EN71/3
- Excellent processing behavior
- Excellent transparency
- FDA - Code of Federal Regulations (CFR), Title 21
- Regulation (EU) No 10/2011
- Smooth, non-tacky feel
- Various color options and effects possible (incl. transparent colors, metallic & pearlescent effect)

Processing Method: Injection Molding

	Color / RAL DESIGN	Hardness DIN ISO 7619-1 ShoreA	Density DIN EN ISO 1183-1 g/cm ³	Tensile Strength ¹ DIN 53504/ISO 37 MPa	Elongation at Break ¹ DIN 53504/ISO 37 %	Haze ² %
TF3FHT	transparent	30	0.880	4.5	600	8.00
TF4FHT	transparent	40	0.880	5.5	600	8.00
TF5FHT	transparent	50	0.890	5.5	600	15.00
TF6FHT	transparent	60	0.890	7.0	650	22.00
TF6THT	transparent	59	0.890	10.0	650	9.00
TF7FHT	transparent	70	0.890	9.5	650	30.00
TF7THT	transparent	69	0.890	16.0	650	10.00
TF8FHT	transparent	80	0.890	10.0	600	35.00
TF8THT	transparent	77	0.890	24.0	650	11.00



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

² Values measured according to ASTM D 1003 with a specimen thickness of 2 mm and the transmission tester Haze-Gard plus (BYK).

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



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Processing Guideline Injection Molding

Cylinder temperature	180 - 200 - 220 °C, max. 250 °C (360 - 390 - 430 °F, max. 480 °F)
Hotrunner	Hot runner temperatures: 180 - 220 °C (356 - 428 °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	50 - 60 °C (120 - 140 °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).
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.

