

FC/HE/tl Series
THERMOLAST® K

The FC/HE/tl Series is your material solution for applications with food contact, providing excellent resilience properties. The series is available in translucent colors.

Typical applications

- Closures
- Flexible Connections
- Household articles
- Membranes
- Packaging (for food and careproducts)
- Seals
- Valves

Material advantages

- Applications with food contact
- Code of Federal Regulations, Title 21 (CFR 21) "FDA"
- Easy coloring (compounds in natural colors)
- EN71/3
- Excellent mechanical properties
- Halogen-free
- High resilience
- Perfect adhesion to PP
- Regulation (EU) No. 10/2011

Processing Method: Extrusion, Injection Molding

| | Color / RAL DESIGN | Hardness DIN ISO 7619 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 % | Tear Resistance ISO 34-1 Methode B (b)(Graves) N/mm | CS 72 h/23 °C DIN ISO 815-1 Method A % | CS 24 h/70 °C DIN ISO 815-1 Method A % | CS 24 h/100 °C DIN ISO 815-1 Method A % |
|---------------|--------------------|------------------------------------|---|--|---|---|--|--|---|
| TF4AAB | translucent | 40 | 0.890 | 8.0 | 700 | 29.0 | 23 | 80 | 90 |
| TF5AAC | translucent | 50 | 0.890 | 13.0 | 750 | 16.0 | 16 | 31 | 50 |
| TF6AAF | translucent | 58 | 0.890 | 14.0 | 750 | 17.0 | 21 | 32 | 55 |
| TF7AAC | translucent | 67 | 0.890 | 16.0 | 750 | 21.0 | 24 | 38 | 61 |
| TF8AAB | translucent | 75 | 0.890 | 18.5 | 750 | 27.0 | 28 | 41 | 60 |
| TF9AAA | transparent | 83 | 0.890 | 20.5 | 700 | 30.0 | 29 | 41 | 70 |
| TF9AAB | translucent | 95 | 0.900 | 22.0 | 650 | 66.0 | - | - | - |

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

This datasheet is an extract of the KRAIBURG TPE program. Please contact KRAIBURG TPE to select the compound suitable for the requirements.

Disclaimer: The information provided in this documentation corresponds to our knowledge on the subject at the date of its publication and may be subject to revision as new knowledge and data becomes available. All values reported are typical values based on sample test results and are not a guarantee of performance. The responsibility to conduct testing to determine suitability of use for the particular process or end-use application remains with the customer. KRAIBURG TPE does not warrant or assume any liability with regards to the use of the information presented in this document.

FC/HE/tl Series

THERMOLAST® K

All values published in this data sheet are rounded average values.
Specification limits are based on three-fold standard deviation from the average value.

This datasheet is an extract of the KRAIBURG TPE program. Please contact KRAIBURG TPE to select the compound suitable for the requirements.

Disclaimer: The information provided in this documentation corresponds to our knowledge on the subject at the date of its publication and may be subject to revision as new knowledge and data becomes available. All values reported are typical values based on sample test results and are not a guarantee of performance. The responsibility to conduct testing to determine suitability of use for the particular process or end-use application remains with the customer. KRAIBURG TPE does not warrant or assume any liability with regards to the use of the information presented in this document.

2016-04-18

CUSTOM-ENGINEERED TPE AND MORE

© 2016 by KRAIBURG TPE
Subject to change, errors excepted.
Check www.kraiburg-tpe.com for the latest version

FC/HE/tl Series
THERMOLAST® K
Processing Guideline Injection Molding

| | |
|-------------------------|--|
| Cylinder temperature | 180 - 200 - 220 °C, max. 250 °C (360 - 390 - 430 °F, max. 480 °F) |
| Hotrunner | Hot runner temperatures: 200 -250 °C (390 - 480 °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 colour 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) |
| Pre drying | 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° 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. |

This datasheet is an extract of the KRAIBURG TPE program. Please contact KRAIBURG TPE to select the compound suitable for the requirements.

Disclaimer: The information provided in this documentation corresponds to our knowledge on the subject at the date of its publication and may be subject to revision as new knowledge and data becomes available. All values reported are typical values based on sample test results and are not a guarantee of performance. The responsibility to conduct testing to determine suitability of use for the particular process or end-use application remains with the customer. KRAIBURG TPE does not warrant or assume any liability with regards to the use of the information presented in this document.

FC/HE/tl Series
THERMOLAST® K
Processing Guideline Extrusion

| | |
|-------------------------|--|
| Cylinder temperature | 160 - 180 - 200 °C, max. 250 °C (320 - 360 - 390 °F; max. 480 °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) |
| Pre drying | 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. |

This datasheet is an extract of the KRAIBURG TPE program. Please contact KRAIBURG TPE to select the compound suitable for the requirements.

Disclaimer: The information provided in this documentation corresponds to our knowledge on the subject at the date of its publication and may be subject to revision as new knowledge and data becomes available. All values reported are typical values based on sample test results and are not a guarantee of performance. The responsibility to conduct testing to determine suitability of use for the particular process or end-use application remains with the customer. KRAIBURG TPE does not warrant or assume any liability with regards to the use of the information presented in this document.