KRAIBURG TPE

Datasheet

FC/S Series

THERMOLAST® K

The FC/S Series consists of extremely soft materials for applications with food contact. They are available in natural-colored, translucent and highly transparent versions. The materials have a dry feel.

Typical applications

- Baits
- Cushioning
- Fun articles
- Function and design elements
- Grip applications
- Protectors
- Toys

Material advantages

- Adhesion to PP
- Applications with food contact
- Dry surface
- Easy processing
- EN71/3
- Excellent mechanical properties at low hardness
- FDA - Code of Federal Regulations (CFR), Title 21
- Pleasant surface feel (Soft touch)
- Regulation (EU) No 10/2011

Processing Method: Injection Molding

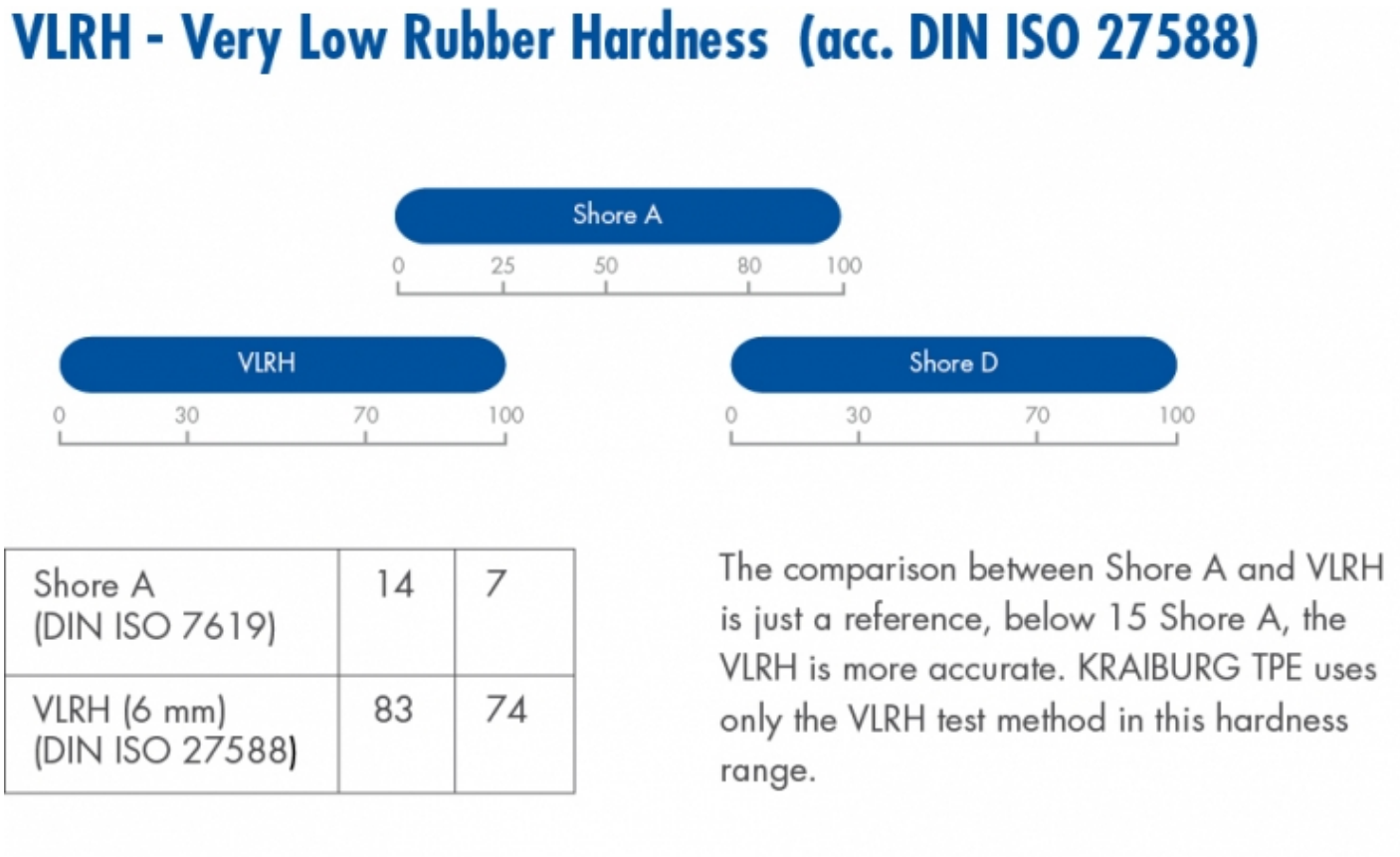
	Color / RAL DESIGN	Hardness DIN ISO 27588 (D=6mm) VLRH	Density DIN EN ISO 1183-1 g/cm3	Tensile Strength [1] DIN 53504/ISO 37 MPa	Elongation at Break [1] DIN 53504/ISO 37 %	Tear Resistance ISO 34-1 Methode B (b)(Graves) N/mm
TF0STL	translucent	51	0.870	1.5	800	3.0
TF0STT	transparent	73	0.880	0.5	500	2.0
TF1SNT	natural	74	1.010	2.0	700	4.0
TF1STL	translucent	75	0.880	2.0	750	4.0
TF1STT	transparent	83	0.880	0.7	350	4.0
TF2SNT	natural	83	1.040	3.0	750	8.0
TF2STL	translucent	81	0.880	3.0	700	7.0
TF2STT	transparent	85	0.880	0.7	500	4.0

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

Info: TF0STT,TF1STT and TF2STT: Risk of blocking due to heat sensibility (important for transport and storage)

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

VLRH - Very Low Rubber Hardness



Shore A (DIN ISO 7619)	14	7
VLRH (6 mm) (DIN ISO 27588)	83	74

The comparison between Shore A and VLRH is just a reference, below 15 Shore A, the VLRH is more accurate. KRAIBURG TPE uses only the VLRH test method in this hardness range.

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Processing Guideline Injection Molding	
Cylinder temperature	140 - 160 - 180 °C, max. 220 °C (280 - 320 - 360 °F, max. 430 °F)
Hotrunner	Hot runner temperatures: 160 - 180 °C (320 - 360 °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)
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	The use of a needle valve nozzle 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.