

Technical datasheet

Compound varioShore

colorFabb

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Want to print foam parts? Try using our Compound varioShore, which is a TPU based compound including a foaming agent. Our compound varioShore has a few main distinctive features: its variable shore hardness, reduced weight and density and soft touch. Compound varioShore allows users to vary the density of the material by adjusting temperature and material throughput (speed & layerheight). At temperatures between 200 and 250C the materials will start to expand to roughly 1.4-1.6 times its original volume, which reduces the density to 0.7 to 0.9 g/cm³. This means the material can be printed at low flow rates (60-70%), to compensate the active foaming, which in return gives very soft printed parts.

Between 190-200C the material can be printed without foaming, resulting in different haptics and harder prints compared to foamed samples. From shore hardness 92A(unfoamed) to shore 55A (maximum foamed). Developed in co-operation with Lubrizol, compound varioShore is a material ideally suited for printing large foam parts.

TYPICAL MATERIAL PROPERTIES

Physical properties	Unit	Value	Method
Density	g/cm3	1,22	ASTM D-792
Glass transition temperature	°C	-20	DSC
Hardness	Shore A	92	ASTM D-2240
Tensile Strength	MPa	58,6	ASTM D-412
Ultimate Elongation	%	490	ASTM D-412
Density	g/cm3	1,22	ASTM D-792
Glass transition temperature	°C	-20	DSC

GUIDELINES FOR PROCESSING

Processing temperature	190°C (unfoamed) – expected foaming activation between 200-210C, maximum foaming at temperature 210-230C.
Drying advice	60°C for 6-9 hours

Disclaimer

The product- and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.