



PROCESSING GUIDELINES

TRIBOFORCE[®] PEEK

GENERAL

TRIBOFORCE[®] PEEK resins can be molded with usual types of molding machines, they can heat up to 450 °C. In principle the same processing conditions as for standard reinforced PEEK fit for **TRIBOFORCE[®] PEEK**. Due to the high processing temperature and the abrasion of reinforced PEEK, for barrel, screw and hot runner systems wear resistant steel must be specified. Heated, open nozzles are recommended for use in molding. For best molding and good part quality the actual shot size should be between 10 % and 70 % of the machine rated capacity and the screw design should be appropriate. A back-flow valve is necessary for molding.

MATERIAL STORAGE AND DRYING

TRIBOFORCE[®] PEEK resins are supplied dry (less than 0.2 % moisture by weight) and are ready to mold directly from the moisture-proof shipping containers. We recommend dry storage areas. The required final water content for best molding and part quality is less than 0.1 %, therefore we recommend pre-drying in a hopper dryer working with dehumidified air (dewpoint below - 30 °C) or an oxygen-free environment (vacuum oven) at 120 to 160 °C for minimum 4 hours. After drying hygroscopic materials have to be protected against atmospherical moisture.

RECOMMENDED MACHINE PARAMETERS | MOLD TEMPERATURE

Parameter	Range
dosing speed	less than 30 m/min.
back pressure	up to 80 bar
melt temperature	370 °C to 410 °C
injection pressure	up to 1800 bar
follow-up pressure	500 to 1400 bar
injection speed	medium to high
mold temperature	140 °C to 200 °C

We recommend mold temperatures approx. 180 °C, therefore hot oil heaters are necessary. Purge materials should be stable at the elevated temperatures used to mold **TRIBOFORCE[®] PEEK**. Common purging materials for downtimes and shut down are polysulfone, polyetherimide, and high density polyethylene.

The specified values are given as a guide only. The values actually required will be a function of the geometry and the desired quality of the injection moulded part, in particular.

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