

## ANNEALING RECOMMENDATIONS OF THERMOPLASTICS

	Heating rate beginning from (10 °C/h)	Annealing guideline (°C)	Cooling rate up to (°C)
GEHR PVC-U®	-	60	-
GEHR PVC-C®	-	90	-
GEHR PE-HD®	-	90	-
GEHR PP-H®	-	100	-
GEHR PP-30GF®	90	150	90
GEHR ABS®	-	70	-
GEHR PMMA®	50	80	50
GEHR PA®	90	150	90
GEHR POM-C®	90	150	90
GEHR PET®	90	150	90
GEHR PBT®	90	150	90
GEHR PC®	90	140	90
GEHR PVDF®	90	150	90
GEHR E-CTFE®	80	105	80
GEHR PSU®	145	165	145
GEHR PPSU®	140	200	140
GEHR PEI®	140	200	140
GEHR PPS®	150	200	150
GEHR PEEK®	140	200	140

Calculation:

$$^{\circ}\text{F} = \left(\frac{9}{5} \times ^{\circ}\text{C}\right) + 32$$

$$^{\circ}\text{C} = \frac{5}{9} \times (^{\circ}\text{F} - 32)$$

Despite all precautionary measures an uneven cooling speed in the production process of the semi-finished material might be inevitable; in this case internal tensions might occur. Likewise tensions can be conferred into the part by the machining process. These tensions can lead to the distortion and in the worst case even to the breaking of the part. To reduce the danger of distortion or breaking an annealing e.g. in air or in nitrogen is recommended, with an annealing time of min. 2 hours (4 hours are better) for each 10 mm wall thickness. To avoid additional tensions while heating or/and cooling down the material, these processes should be carried out very slowly. We recommend to use 3-times as much time for the cooling down as for the heating. The time of these processes has to be added to the regular annealing time.