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Technical Literature G-03-01

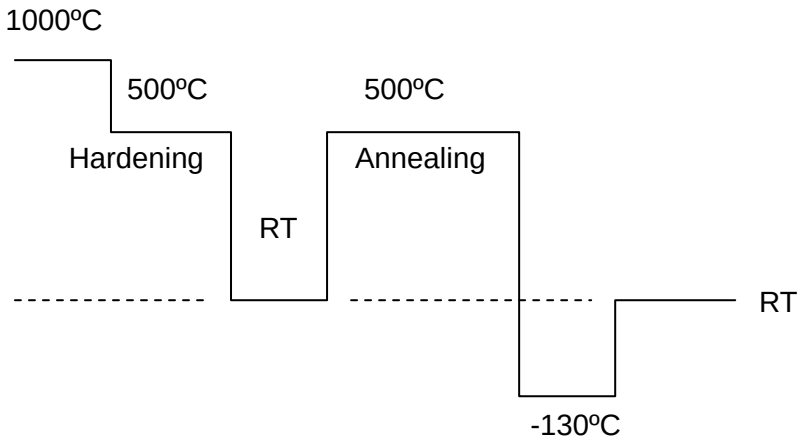
Information on the Mold for AURUM®

The mold temperature to be used in molding AURUM® is normally 180ºC to 200ºC, a little higher than that for the conventional engineering plastics. For this reason, a construction material having as high hardness as possible is suitable for the construction material of the mold so that there will be no trouble of galling or friction at high temperatures.

Especially for the glass-fiber-reinforced and other filler-reinforced grades, hardened steel and cold-rolled die steel which have a use hardness (HRC) of 56 to 58 is well suited. Further, polyimide resin (AURUM®) itself does not emit any corrosive gas that will damage the surface of the mold even when it is thermally decomposed. However, there are some AURUM® wear/friction grades that contain PTFE, and therefore care should be taken in using those grades. It should be noted that for the PTFE-containing grades, a stainless steel-based material having corrosion resistance is suitable.

In the case of superhigh precision molding requiring dimensional accuracy as a critical factor, the annealing temperature for hardened steel needs to be 500ºC, or higher than the resin melting temperature of 400ºC. Given below is an example of hardened steel manufacturing temperature conditions.

Example



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