

Meldin[®] 7000 Machining Guidelines

TOOLING:

The Meldin[®] 7000 family of materials is easily machined due to the mechanical strength, stiffness, and the dimensional stability of the material. The relative lower grades of carbide, such as C-2, are probably the best tools to employ. The tool life is exceptional. A feed rate between 0.025 mm and 0.10 mm per revolution will result in an acceptable finish. A feed rate of 0.025 mm per revolution will result in a maximum 0.8 µm finish. Chip-breaker designed tools work well.

Holding the material is crucial in machining a satisfactory product. Using a six-jaw chuck assures an even distribution of force exerted by the jaws. Collets are the best method of holding the piece, because they encase over 90% of the piece part periphery.

TURNING and BORING:

When rough turning and boring it is advisable to use a feed rate of 0.25 – 0.38 mm/rev. When finish turning and boring it is advisable to use a feed rate of 0.025 – 0.10 mm/rev.

MILLING:

Carbide end mills are appropriate in milling Meldin[®] 7000 materials and result in little or no chipping. Fly-cutting is also acceptable and produces very good finishes on the piece being machined.

DRILLING:

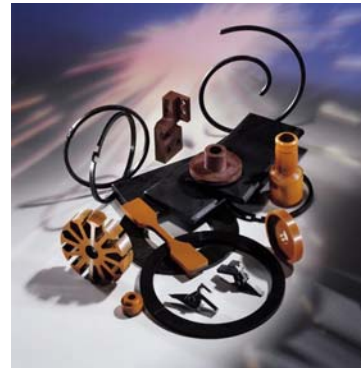
Standard HSS drills are acceptable. Solid carbide drills will have longer life.

MEASURING:

Meldin[®] 7000 is a plastic and care should be taken when checking for part dimensions. For example: If the person checking the piece were to use standard measuring techniques, clamping down on the piece, the force of the instrument may distort the piece ever so slightly. It is therefore recommended to use the “go/no-go” method.

Set the micrometer at the high end of the tolerance and pass the piece through the jaws of the micrometer with no drag; the piece is acceptable. Set the micrometer at the low end of the tolerance and attempt to pass the piece through the jaws. Any resistance felt from trying to pass the piece through the jaws means the piece is above the low end of the tolerance and also acceptable.

Pins should not be forced through a bore; the pin should be allowed to fall through the I.D. bore by its own free weight.



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