



SINCE 1941

MuMETAL®  
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NETIC®  
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ISO 9001:2008

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**MAGNETIC SHIELD CORP.**

**Machining MuMETAL®**

#### MACHINING

The unannealed, cold-worked condition is best suited for machining operations. The material exhibits characteristics like those of stainless steels. Low cutting speeds, cooling cutting oils, and carbide or high-speed steel cutting tools are required; the latter must be kept sharp. After machining is completed, residual films of oil, grease or dirt must be removed as completely as possible before annealing the parts. Oils with added Sulphur are entirely unsuitable.

#### ANNEALING IMPORTANCE

The final heat treatment is paramount for the magnetic properties. It relieves mechanical stresses, produces a homogenous microstructure from the distorted, cold formed structure by means of recrystallization and develops grain growth. For example, the permeability of the cold rolled state increases by more than three orders of magnitude on final annealing.

#### HANDLING FINISHED PARTS

After final annealing the material is generally magnetically and mechanically soft. Mechanical stress must be avoided, as both elastic strain and plastic deformation can severely degrade the magnetic performance.

\*Note: All product data given in this data sheet are typical values based on the experience of Magnetic Shield Corporation. They are not part of material specification and do not guarantee particular characteristics or performance.

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