



Official MAGNETIC SHIELD CORPORATION Document

What effect does heating the magnetic material have on its magnetic shielding properties?

CO-NETIC and NETIC magnetic shielding alloys have a positive coefficient of permeability with respect to temperature. This is a quick way of saying that the permeability increases as temperature increases. This occurs until operating temperature nears the Curie temperature, defined as the temperature where permeability goes to 1 and the alloy becomes magnetically transparent. The Curie temperatures are between 850°F (454°C) and 840°F (449°C) for CO-NETIC, NETIC and MuMetal. At operating temperatures above the Curie temperature, the shield will not provide any attenuation of the magnetic field. Rolloff of permeability begins as operating temperature nears (within 25°F) the Curie temperature listed, so a safety factor for allowable operating temperature should be used.

Note: Temporary temperature excursions above curie temperature do not degrade the alloys. Shielding function is restored when the temperature again falls below Curie point.