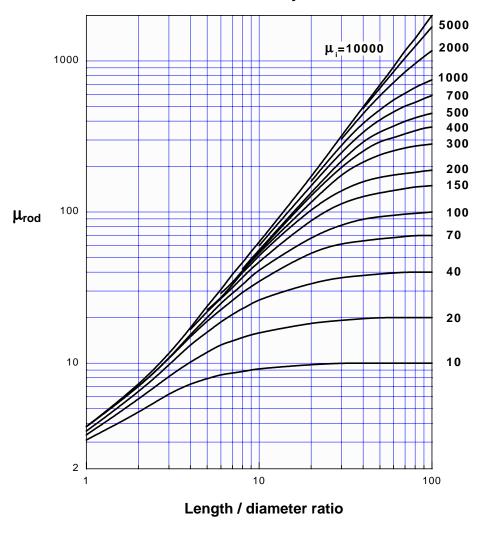
NATIONAL MAGNETICS GROUP, INC. MANUFACTURERS OF MAGNETIC AND ADVANCED MATERIALS

MANUFACTURERS OF MAGNETIC AND ADVANCED MATERIALS AFFILIATE: TCI CERAMICS, INC.

Effective Permeability of Ferrite Rods

The following figure illustrates a family of curves showing the value of effective permeability of a ferrite rod as a function of its length to diameter ratio and its material permeability. It demonstrates that, in general, a great difference exists between the material permeability and the effective permeability of the rod. It also demonstrates that, in some instances, the mechanical dimensions of a rod have a greater impact on its effective permeability than its material permeability does.



Rod Permeability vs Length / Diameter Ratio with Material Permeability as Parameter

 $\mathsf{FERRITES} \bullet \mathsf{MAGNETS} \bullet \mathsf{IRON} \ \mathsf{CORES} \bullet \mathsf{GARNETS} \bullet \mathsf{DIELECTRICS} \bullet \mathsf{RESONATORS} \ \bullet \mathsf{POWDERS}$

1210 WIN DR. BETHLEHEM, PA 18017-7061 TEL: 610-867-7600 • FAX: 610-867-0200 • EMAIL: <u>sales@magneticsgroup.com</u>