

**Subject:** CLADDING THICKNESS, PO#3A-11032

**Date:** Mon, 23 Jun 2003 15:53:18 -0400

**From:** "Swogger, Brad" <Brad.Swogger@na.omgi.com>

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Frank,

Typically the cladding thickness is 10 - 15% of the cross sectional area. However, this cladding thickness is more uniform with round bar. The cladding also varies some with different production techniques, as 0.125" diameter bar is vary different from 2.5" x 20" plate. Attached are tech data sheets about cladding thickness. Also, one tech data sheet is specifically for the 2.5 x 20 plate. Let me know if you have any further questions after reviewing the data sheets.

<<715\_Glidcop\_Extruded\_Plates-Cladding\_Thickness.doc>>  
<<716\_Glidcop\_Cladding\_Removal.doc>>

Kind regards,  
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 715_Glidcop_Extruded_Plates-Cladding_Thickness.doc	<b>Name:</b> 715_Glidcop_Extruded_Plates-C <b>Type:</b> WINWORD File (application/ms <b>Encoding:</b> base64 <b>Download Status:</b> Not downloaded with message
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 716_Glidcop_Cladding_Removal.doc	<b>Name:</b> 716_Glidcop_Cladding_Removal.doc <b>Type:</b> WINWORD File (application/msword) <b>Encoding:</b> base64 <b>Download Status:</b> Not downloaded with message
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# TECHNICAL DATA SHEET

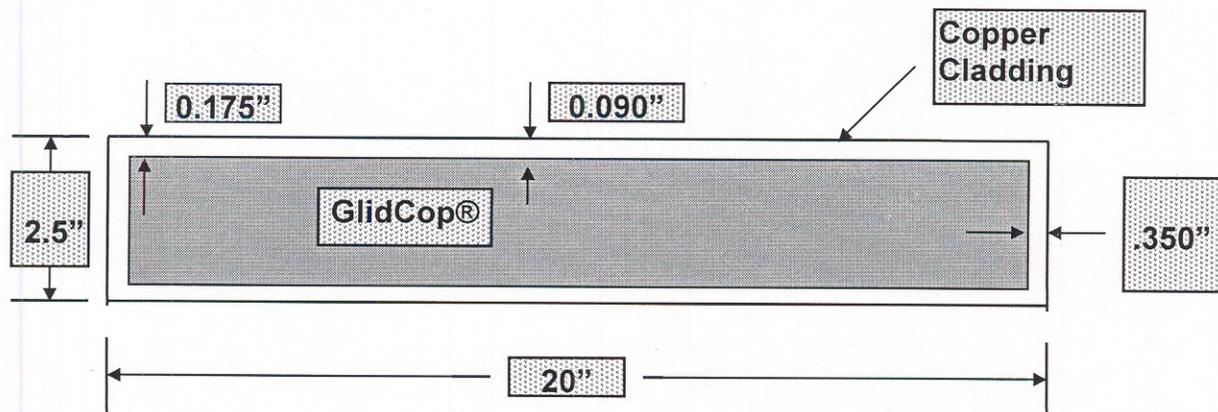
## GLIDCOP® DISPERSION STRENGTHENED COPPER EXTRUDED 2 1/2" X 20" PLATES - CLADDING THICKNESS

GlidCop® Extruded 2 1/2" X 20" plates have a copper cladding around the outer perimeter of their cross-section. This cladding is remnant of the copper canister that is required in the extrusion process whereby the GlidCop powder is placed inside the canister for handling and heating purposes.

The sketch below shows typical thicknesses of this cladding about the perimeter of the extruded cross-section. Note that the thicknesses shown are typical, and there may be variations through the length of a single plate, and from plate to plate.

In applications that require that the entire cross-section have the high strength characteristics of GlidCop, or in applications within a vacuum environment, the copper cladding is typically removed by conventional machining.

It is recommended that to assure removal of all cladding, at least 1.0" be machined from both edges (from the 20" width), and at least .25" be removed from both the top and bottom faces (from the 2 1/2" thickness). The maximum working dimensions for a GlidCop plate that has been DECLAD is thus 2.0" thick X 18.0" wide X length.



### MATERIAL SAFETY DATA

See MSDS before using this product.

### SAMPLES AND SERVICES

For further information or sample quantities for test, contact our Customer Service Department.

The recommendations and suggestions given in this data sheet are made without any representation of warranty, expressed or implied, in law or fact and upon the condition that purchasers make their own tests to determine the suitability of such products for their particular purposes. Statements concerning the possible use of the products or processes described are not intended as recommendations or permission to use the same in the infringement of any patent or to practice a patented invention without a license.

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## TECHNICAL DATA SHEET

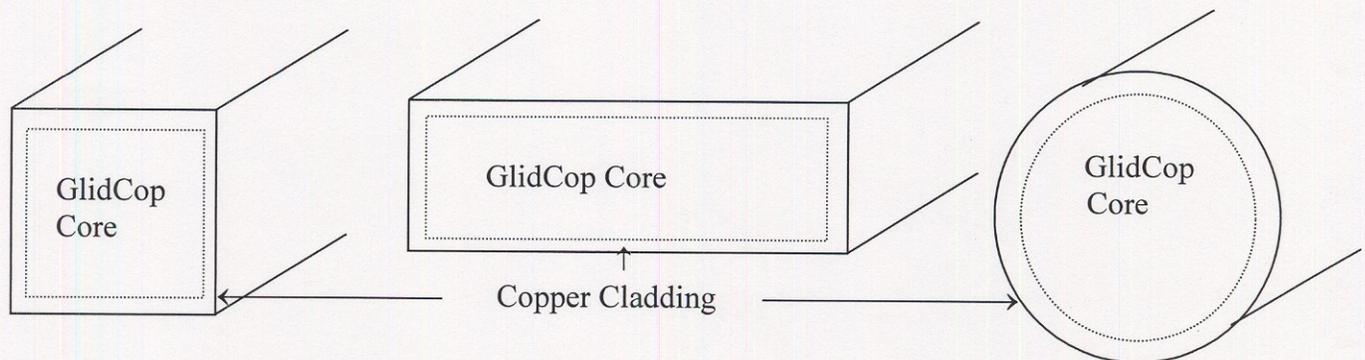
### GLIDCOP® DISPERSION STRENGTHENED COPPER

#### Cladding Removal

GlidCop® Dispersion Strengthened Copper is an engineered, patented material made through the technology of powder metallurgy. In the production of GlidCop rod and bar forms, GlidCop powder is placed inside pure copper cylinders and subsequently consolidated to full density. In this process, the pure copper cylinder becomes an integral part of the final rod product. The GlidCop rod is actually a composite which includes a hard GlidCop inner core which is encased in a soft plain copper outer "cladding."

Some applications require that the plain copper cladding be removed from the GlidCop rod to meet specific design or application requirements.

Cladding thickness will usually represent 8-12% of the total GlidCop rod cross-section. It is generally recommended that 20% of the material thickness be removed by milling or grinding to assure complete removal of this copper cladding.



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