glebusalloys

self lubricating bearing material

The G-METAL™ Advantage

Engineers at Glebus Alloys have developed G-METAL™ a material for use in demanding industrial environments. This process was developed in 1998 and we have been refining and improving the material since then.Most importantly, the Top 10 tire companies worldwide as well as wind turbines manufacturers make our customer list. Our technology greatly surpasses similar products in the marketplace.

Self Lubricant

G-METAL™ material contains the maintenance free benefits of self lubricating sintered bronze/graphite. The concentrated micro dispersion of the graphite throughout the metallic matrix ensures consistent lubricating properties over the entire wear area of the part.

Low Coefficient of Friction

Whether used in wet or dry conditions, the materials exudes a very low coefficient of friction. Higher loads increase the lubricating features and further reduce friction wear. G-METAL™ is suitable for oscillating, rotational, linear and micro movements as well as applications involving high edge pressure.

Extreme Conditions

Intended to withstand hot, harsh, and dirty environments, the material can also be used in seawater, radioactive areas and corrosive situations.

High Load Capacity

G-METAL™ can handle high static or dynamics loads.

Temperature Resistance

G-METAL™ can endure heat upwards of 650 C and temperatures as low as-50 C.

Shapes

G-METAL™ material can be formed into many shapes and sizes including wear plates, rolled bushing, cylindrical bearings, spherical bearing, split bearing, sleeves, liners, guides and other customizable shapes. A patented conical wear plate is also available for certain industry for certain industry applications. Unlike graphite plugged bronze, the material keeps its self lubricating properties during the entire wear life cycle of whatever part it is formed into.

Machining Flexibility

Machining of the G-METAL™ material can be accomplished by conventional machine shop tecniques. Drilling, turning, milling, tapping and grinding methods used for brass or bronze will apply to the G-METAL™ materials

Environmentally Friendly

G-METAL™ uses a 99.7% clean and chemically neutral electrolyte that eliminates the potential for corrosion and assists in reducing cleanup costs. It requires no other operating lubrication, thus reducing pollution effects common with petroleum based greases and lubricants.

Why Self Lubricating Technology?

- Lowers maintenance costs
- Decreases down time
- Eliminates complex lubrication systems
- Reduces polluting effects of lubricants
- Cleaner working areas and equipment

Bi-Metallic Material

To increase strength and reliability, G-METAL™ can be laminated to a steel or stainless steel backing. Manufactured by a continuous hot rolling sintering technology, the reliability and service life is greatly increased compared to conventional wear material. This bi-metallic form of G-METAL™ is available in many shapes and sizes. While wear plates are the most common, the material can also be used for bushings, bearings and other applications.

Self Lubricating Material

Glebus Alloys produces G-METAL™, a unique, self lubricating material for plates, bearings, bushings and other wear surfaces. Our designs can be customized to fit your needs.

Alloys

A variety of alloys can be formed with G-METAL™ material. Bronze, nickel, iron, iron/nickel and lead can be produced with the lubricants graphite or graphite and molybdenum.

Dimensions

G-METAL™ cylindrical bearings can be made from 8 mm to 280 mm in diameter. Rolled bushings can have a minimum inner diameter of 20 mm and a wall thickness starting at 1.5 mm. Wear plates can be produced with maximum surface dimensions of 500 mm x 250 mm x 40 mm.

Industries

Glebus Alloys materials have successful applications in many industries including automotive technology, steel and iron fabrication, hydropower and energy production, plastics manufacturing, pulp and paper products and food and beverage processing.

Oil Impregnated Material

This porous oil impregnated material is design for operation in mixed or hydrodynamic lubrication. Load and speed release the lubricant into the contact zone which allows for low friction and wear rates.

Sinter Filters

Made with a high and finely tuned porosity, this product is used for cleaning, de - oiling and flow control.

Clutch Discs

This part is made from steel membranes with one or two sides of sintered friction material.

Quality and Customer Support

Glebus Alloys is committed to being a high quality organization and is certified to ISO 9004: 2014 standards. Management operates on the principles of lean manufacturing, allowing us to providecustomers with lower costs and shorter lead times. Custom or non-inventoried parts are also shipped on short notice, wmost within 2 - 3 weeks. With Glebus Alloys, you gain access to professionals with over 100 years of collective experience in heavy industry applications. As a customer centric company, we provide project specific solutions based on your drawings. Our goal is to give customers feedback on projects or issues within 24 hours. A worldwide base of customers enables us to provide you with a unique perspective on your situation. Whether you operate in Europe, Asia, Australia, Africa or the Americas, Glebus Alloys can supply you business with the answers you need.

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