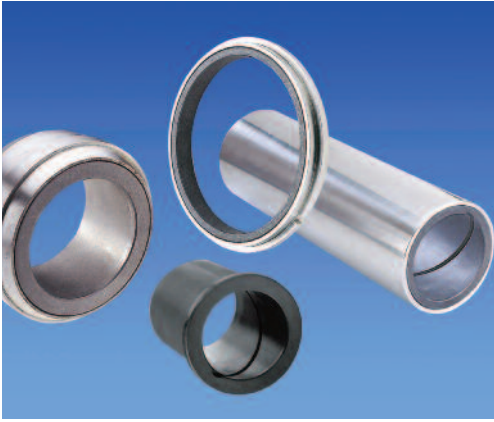


# GRAPHALLOY® Solutions for Tough Bearing Problems



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## WHY DO ENGINEERS RELY ON SELF-LUBRICATING GRAPHALLOY®?

Because GRAPHALLOY materials thrive in harsh environments where other bearings fail. Hot, cold, wet or dry... GRAPHALLOY reduces downtime, provides maintenance-free operation, and lowers expenses in a wide variety of applications and industries.

### Applications

- Pumps • Conveyors • Valves • Turbines • Ovens • Dryers • Mixers • Kilns
- Plating Tanks • Microwave Equipment • Extruders • Food Processing

### Industries

- Oil & Gas • Food Equipment • Metal Processing • Steel • Power Plants
- Refineries • Pharmaceutical Equipment • Pulp and Paper Mills
- Heat Treating • Glass Plants

## GRAPHALLOY IS THE SOLUTION FOR TOUGH BEARING PROBLEMS

### What is GRAPHALLOY?

GRAPHALLOY is a graphite/metal alloy formed from molten metal, graphite and carbon. It is a uniform, solid, self-lubricating bushing and bearing material that offers superior performance in hundreds of applications where grease, oil and plastics fail. These standard and custom designed products provide lifetime cost savings and significant operating advantages over conventional bushings and bearings.

### Why use GRAPHALLOY?

It's simple... GRAPHALLOY succeeds where grease, oil and plastics often fail. Our bushings can operate in inaccessible locations or where maintenance is difficult to perform.

GRAPHALLOY materials have been solving bearing problems in pumps, ovens and furnaces, conveyors, dampers, dryers and food processing equipment for over 100 years. Our history of success includes process industry applications in refineries, power plants, paper mills, glass plants, heat-treating, bakeries and food equipment.

Additionally, GRAPHALLOY bushings and case rings can improve the reliability and efficiency of pumps.

Because of its unique properties, GRAPHALLOY survives high and low temperatures, submersion, and dusty, dry environments. It will not swell, shrink, or cold flow. GRAPHALLOY bushings are available in over 100 grades with specific properties that meet a wide range of engineering solutions and specifications. GRAPHALLOY bearings have operated for 20 years and longer in some applications.

### Custom Engineered Solutions

While GRAPHALLOY bushings are available in over 100 grades, many situations are unique. Our engineers have extensive experience with all types of industrial machinery and will work with you to design a custom engineered solution for your toughest application problem.





GRAPHITE METALLIZING  
CORPORATION

# The GRAPHALLOY<sup>®</sup> Advantage

## Features

## Benefits

### Self-Lubricating

- Requires no grease or oil
- Permits continuous operation and eliminates downtime
- Will not attract dust
- Solves problems with pumping low lubricity fluids, hydrocarbons, liquid gases, or hot water

### Hot

- Operating temperatures up to 1000°F (535°C) and higher in non-oxidizing atmospheres
- Will not gum or seize
- Ideally suited to applications where oil-based lubricants burn off or oxidize and plastics fail
- Survives thermal shock

### Cold

- -400°F (-240°C)
- Will not congeal or solidify at low temperatures or cryogenic conditions
- Maintains self-lubricating qualities

### Dry

- Works without lubrication
- Helps pumps survive "run dry" conditions, slow roll operation, and frequent start/stop conditions
- Allows immediate pump restarts
- Eliminates galling or seizing in hot and dry conditions

### Wet

- Operates in submerged conditions and hostile liquids
- Will not swell
- Solid lubricant will not wash out

### Chemically Resistant

- Compatible with most industrial liquids
- Works in acids, alkalies, hydrocarbons and liquid gases

### Low Coefficient of Friction

- Constant, low coefficient of friction
- Solid throughout; not just a surface layer

### Special Grades Available

- FDA Accepted / NSF / WRAS



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ISO 9001:2008 Certified  
NSF Certified Grades  
FDA Accepted Grades  
WRAS Material Approved

