Carbon Materials
for Seals & Bearings

Self-lubricating and extreme high-temperature tolerances, approximately 20 unique recipes and over 200 possible material combinations.

Carbon Materials are the most diverse material family in the Seals & Bearings portfolio. Our material expertise makes us the industry leader in the production of tight-tolerance carbon/graphite components for a diverse range of market applications.

Carbon Family	Key Characteristics
Carbon Graphite	Corrosion-resistant Oxidation resistant Dimensionally stable
Graphite	Wide temperature tolerance Chemically inert Superior durability
Resin Bonded Graphite	Approved for food and beverage applications Temperatures up to 200°C Mechanically strong

Carbon materials are intrinsically porous. Impregnations of various other materials make the material impervious, enhancing overall characteristics and customising materials for specific applications. Below is an overview of the main carbon impregnations.

| Impregnation Type	Field of Use
Thermoset Resins	General duty up to 260 °C Water, coolants, fuels, oils, mild chemical solutions, food contacting and pharma.
Carbon	Highly corrosive environments
Metals	High duty applications Antimony – steam, light hydrocarbons Copper – high-pressure services

Carbon Characteristics

- Self-lubricating
- Chemical Compatability
- High-temperature Tolerances
- Thermal Shock Resistance

Material Approvals

FDA

WRAS

Contact us today for our most up-to-date datasheets and a grade recommendation tailored to your application.
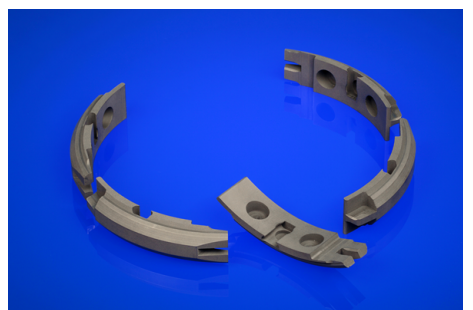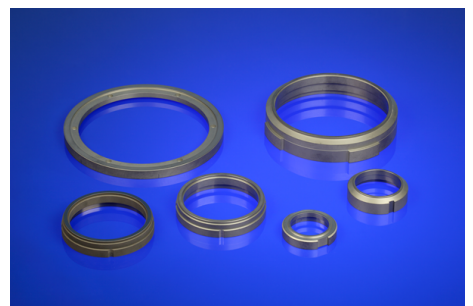
Morgan Carbon Graphite Applications

Morgan Carbon Graphite is impregnated with various materials to give application-specific properties. Some applications include but are not limited to:

- Mechanical seal components for a wide variety of sealing applications
- Canned motor pump bearings
- Radial and axial bearings designed to operate in immersed fluids such as petrol, paraffin and kerosene
- Rotors and vanes
- Structural components

Morgan Graphite Applications

Morgan Graphite is impregnated with various materials to give application-specific properties and characteristics. Some applications include but are not limited to:

- Glass production equipment such as take-out inserts, pusher bars and wear strips.
- Bearings, piston rings and seal rings within metallurgy, furnace and other industrial applications.
- Segment rings for gas turbines.

Morgan Resin Bonded Graphite Applications

For applications requiring complex shapes produced in high volume, we are the industry leaders in the production of resin-bonded graphite seal and bearing components. Some applications include but are not limited to:

- Mechanical seal components for a wide variety of sealing applications
- Axial bearings operating in immersed fluids such as petrol, paraffin, kerosene and water
- Radial bearings
- Rotors and vanes
- Wet or dry running applications

Morgan
Advanced Materials

Morgan Advanced Materials

At Morgan Advanced Materials, our purpose is to use advanced materials to help make more efficient use of the world's resources and to improve the quality of life.

Morgan's highly experienced scientists and application engineers actively engage with our customers to find new solutions for complex and technologically demanding problems.

We are building distinctive competencies in:

- Leading technology and materials science capability and process know-how
- Application engineering
- Customer focus, reputation for quality and delivery and brand

Our core strength is our ability to get to grips with individual customer problems, apply the science and engineer elegant and reliable solutions.

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