



Tribological Coatings for Automotive Applications
SURFACE ENGINEERING · RELIABLE TRIBOLOGY · INNOVATION



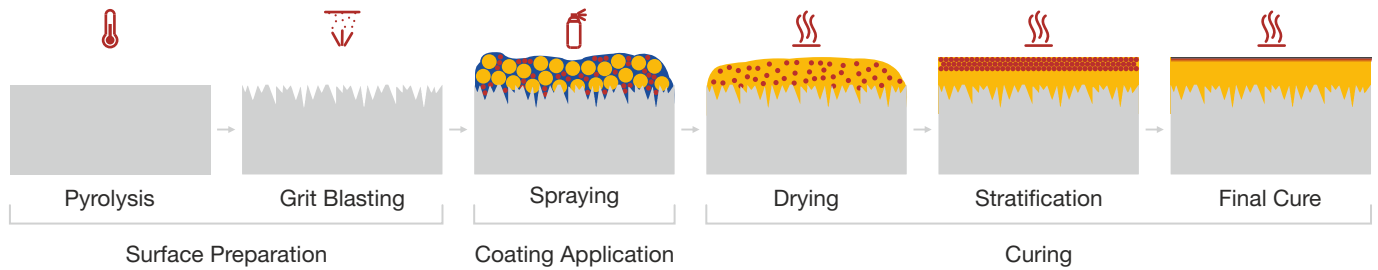
Tribological Coatings

GGB's new product range and coating capabilities aims to provide engineers with greater design freedom permitting them to go beyond existing performance boundaries, irrespective of shape or material. GGB **TriboShield®** coatings are specifically formulated to be self lubricating and provide the full range of thermal, mechanical and tribological possibilities that today's polymers can offer.



Polymers for Performance

TriboShield® coatings are applied directly to the customer's component. GGB employs specifically designed formulations that, through carefully controlled chemistry, stratify during curing to provide optimal distribution of the material components and ensure the most favorable surface energy and transfer film formation. The polymer based coatings can be applied to metallic (steel, stainless, aluminium, titanium, magnesium), ceramic or, in special cases, plastic substrates.

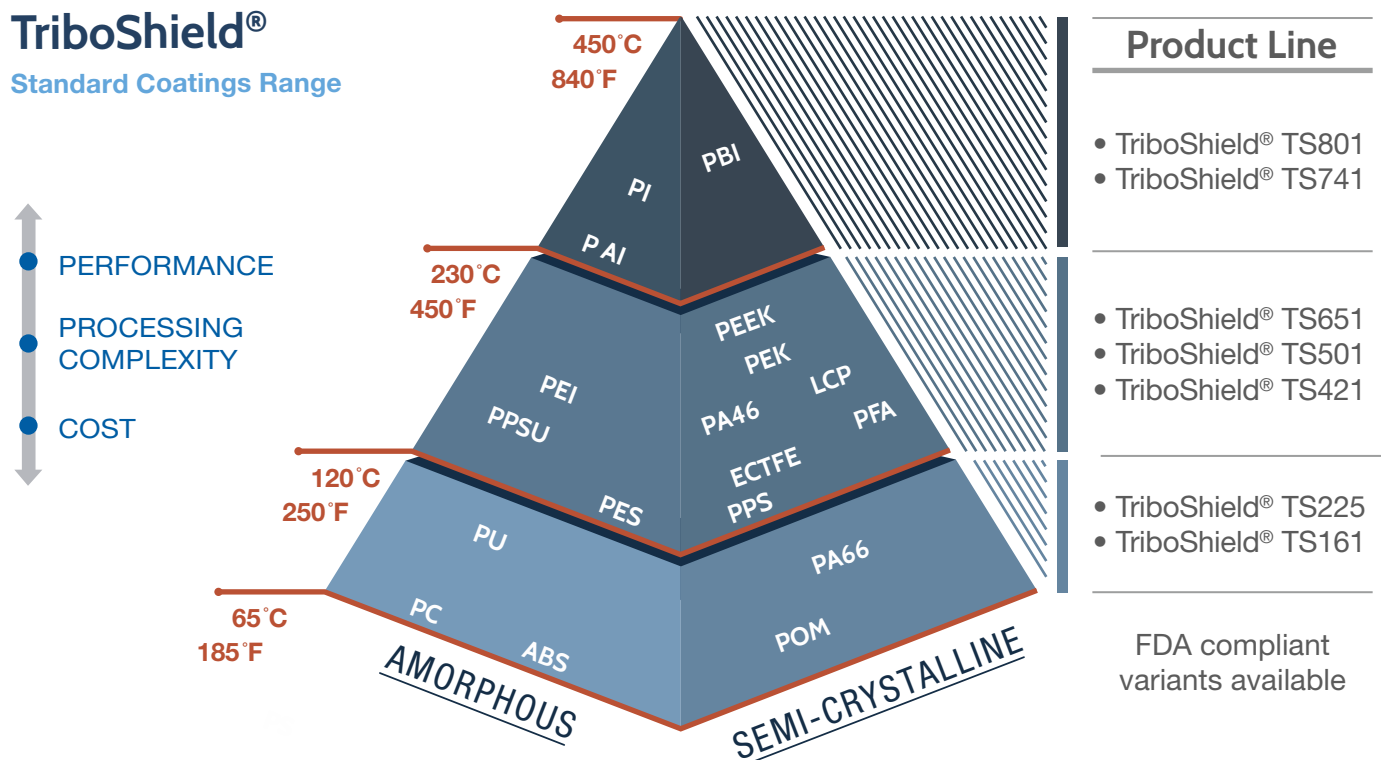


Product Range

The **TriboShield®** product range consists of seven standard coatings. These coatings have been specifically formulated to provide optimum tribological performance across a wide range of operating conditions. GGB coatings are available for both dry and lubricated conditions.

TriboShield®

Standard Coatings Range



Benefits of TriboShield® Coatings

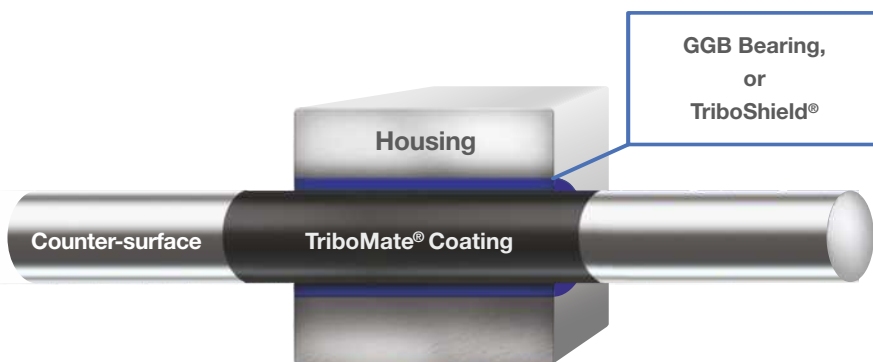
- Reduction of friction and wear for extended lifetime and improved efficiency
- High temperature resistance, up to 350°C / 660°F
- Design freedom: coatings can be applied to parts of virtually any shape, size and geometry
- Coatings can be applied to a precise zone or to the complete component, adding the benefit of corrosion protection to the part
- Micrometric precision of coating thickness for clearance reduction and improved performance
- Thin coating thickness allows compact and light weight designs
- Exceptional corrosion and chemical resistance
- Fewer parts allowing easy assembly and eliminating assembly tooling costs
- Cost reduction through reduced surface finish requirements for coating application

TriboMate®

GGB Paired Coatings

Specially formulated **TriboShield®** versions can be used as counter surfaces that can operate against the traditional GGB bearing or standard **TriboShield®** coatings, delivering exceptional levels of low friction and improved durability.

The **TriboMate®** upgrade is available for the majority of the **TriboShield®** coatings and will be selected by GGB's Applications Engineers based on your running conditions.



If you seek more from your existing system design, GGB can help you engineer your surfaces to deliver optimized tribological performance. In addition GGB offers:

- Extensive understanding of tribology from over 100 years of bearing experience
- One stop shop: design, coating formulation and application, delivering the finished components
- Dedicated Applications Engineering team offering technical guidance throughout the development process
- Global footprint
- Quick turnaround for delivery of prototypes
- Manufacturing plants certified to the most stringent quality standards



With early collaboration, GGB provides the following benefits:



Automotive
application
experts



Global footprint



Fast turnaround
for prototypes



Improved
overall system
efficiency



Increased cost
effectiveness



GLOBAL FOOTPRINT

GGB has manufacturing, sales, service and support locations around the globe. This vast network of resources and expertise enables us to respond promptly to your bearing needs wherever you do business.



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