

# Advanced Electrical Materials for Traction

## Traction Overview



**Morgan Advanced Materials is a leading global supplier in the railway industry providing products, services and solutions for electrical motors and current collector systems.**

**We offer technical support and training to assist you in selecting the optimum solution with respect to performance and life of the motor and current collecting system for your transport vehicles.**



### **Carbon Brushes and Carbon Contacts**

Morgan Advanced Materials is a high performance brush manufacturer with over 100 years experience in serving the traction industry, offering National and Morganite products. Experience has ensured that we can advise the correct grade when considering DC traction systems that witness increased levels of vibration and thermal shock as a result of rapidly changing load currents and increased harsh conditions experienced through thyristor control and regenerative braking.

Morgan Advanced Materials, a global leader in the traction brush market, supplier to key OEM's and major railway companies, provides optimisation of brush/commutator performance.



### **Brush Holders & Insulators**

Morgan Advanced Materials supply a wide range of brush holders, including traction, transit and bespoke designs providing typical design features such as pressure systems with clock springs for robust performance, constant force springs for compact designs and copper based alloys.

We also offer end mounted assemblies complete with support and terminal pins, double ended mounting pins, pillars and stand off pillars, moulded in either high strength GRP or mica glass for high temperature requirements.



### **Earth Return Units**

Morgan Advanced Materials have developed Earth return units for traction applications to provide a reliable and safe system to prevent the current from flowing to the bearings and safely earthing the current, which in turn reduces maintenance costs by protecting the bearings.



### **Contacts and Contact Assemblies**

Morgan Advanced Materials offer a complete in house service from design to tooling and manufacture of contacts and contact assemblies, ensuring high quality standards. We are a leading supplier to both OEM's and major traction companies for both high volume and small batch production of precious metal faced contacts, bimetals, copper segments, tips and die cast high conductivity copper components.

## **Aegis SGR™ Shaft Current Grounding System**

The Aegis SGR™ shaft current grounding system is used for diverting damaging shaft currents on frequency-controlled machines, thus protecting bearings and other sensitive components. Morgan Advanced Materials has exclusive rights of distribution throughout Europe for the Aegis SGR™ shaft current grounding system.



## **Collectors**

Morgan Advanced Materials offer carbon and metalised current collector strips, and assemblies for pantograph, third rail shoe and trolley bus applications. We cover all your requirements from 600v through to 25KV, whether on mainline rail, light rail systems or tramways, local speed through to high speed we have the current collection solution for your needs. With our material expertise and global application engineering experience we have optimised our materials, ensuring long life and high performance of both the collector and overhead wire or rail.



## **Wheel Flange Lubrication**

Morgan Advanced Materials have developed a range of solid lubrication products for Wheel Flange Lubrication. Through our materials expertise a number of materials have been developed to meet varying requirements of different rolling stock types, and performance improvements have been witnessed in terms of lubrication properties, film retention and product life based on arduous conditions seen in modern day service operation.



## **Terminal Blocks**

Morgan Advanced Materials offer terminal blocks in a range of different designs. Our motor terminal blocks carry the quality seal of. (Technical Association of Manufacturers and Processors of typified Plastic Moulding Compounds).



## **Measuring Equipment and Accessories**

When it comes to the technical maintenance and inspection of machinery Morgan Advanced Materials can supply a range of measuring and inspection devices: concentricity measuring instrument, stroboscope, digital spring pressure measuring device, video inspection instrument (Snake Eye) along with others.

Morgan Advanced Materials also offer an extensive range of products for commutator and motor maintenance including the Martindale brand.



## ABOUT MORGAN ADVANCED MATERIALS



Morgan Advanced Materials is a global engineering company offering world-leading competencies in materials science, specialist manufacturing and applications engineering.

We focus our resources on the delivery of products that help our customers to solve technically challenging Problems, enabling them to address global trends such as energy demand, advances in healthcare and environmental sustainability.

### What differentiates us?

- Advanced material science and processing capabilities
- Extensive applications engineering experience
- A strong history of innovation and reinvention
- Consistent and reliable performance
- A truly global footprint
- We find and invest in the best people

#### For all enquiries, please contact our specialist sales and manufacturing sites:

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