

# Laboratory Services

Independent UKAS Accredited Materials Testing Facility



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...where performance matters

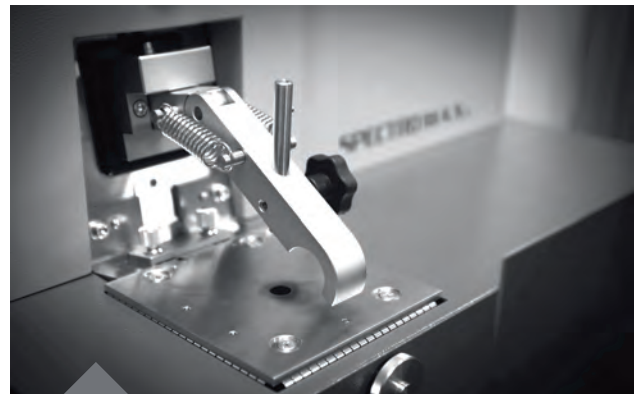
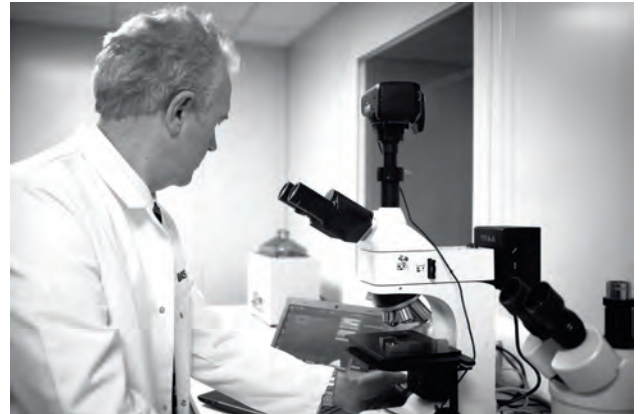
## Independent Material Testing

We are experts in the supply and testing of engineering metals and plastics

Our UKAS accredited materials testing laboratory offers a wide range of services and our metallurgists undertake consultancy services in a variety of application areas.

We undertake both single-event materials testing and on-going sampling programs that can be tailored to fit a customer's requirements. In addition, we are able to offer testing routines for specific customer applications enabling us to offer a supply route for materials with unique certification requirements.

Our testing laboratory is fairly unique in the metal stockholding sector and adds considerable value to our established service of engineering raw material supply for the motorsport market.



Spectro Maxx Spark Emission Spectrometer giving a complete chemical analysis

## Available Testing & Analysis

- Tensile Testing
- Charpy Impact Testing
- Chemical Analysis
- Metallurgical Analysis
- Corrosion Testing
- Hardness Testing
- Physical Properties Testing

## About Smiths High Performance

Smiths High Performance is a leading stockholder and supplier of high performance engineering materials to the global motorsport sector. We are supply partners in a range of specialist motorsport markets including Formula 1, Formula E, NASCAR, MOTO GP, WEC & WRC.

Further technical data available on the reverse of this Datasheet

## Laboratory Equipment

Available Tests / Analysis	Equipment
Tensile Testing	<ul style="list-style-type: none"> <li>30 Tonne Tensile Tester (ASTM E8 &amp; A370, BS EN ISO 6892-1 &amp; BES EN 2002-1)</li> <li>Elevated Temperature Tensile Testing facilities to 200° C (ASTM E21 &amp; BS EN ISO 6892-2)</li> </ul>
Charpy Impact Testing	<ul style="list-style-type: none"> <li>300J Impact Tester (ASTM E23 &amp; A370)</li> <li>Cryogenic Cooling down to minus 60° C</li> </ul>
Chemical Analysis	Spectro Maxx Spark Emission Spectrometer for analysing: <ul style="list-style-type: none"> <li>Iron Base</li> <li>Copper Base</li> <li>Nickel Base</li> <li>Aluminium Base</li> <li>Titanium Base Materials</li> </ul>
Metallurgical Analysis & Corrosion Testing	Metallurgical Microscopes, sample preparation equipment and associated equipment to allow: <ul style="list-style-type: none"> <li>Metallurgical Evaluation to ASTM A923 Method A</li> <li>Phase Balance Analysis to ASTM E582</li> <li>Corrosion Testing to ASTM G48 + A923 Method C</li> <li>Grain Size Analysis to ASTM E112</li> </ul>
Hardness Testing	<ul style="list-style-type: none"> <li>Vickers (HV10 &amp; HV30) and Rockwell C Hardness Testing</li> </ul>
Physical Properties Testing	<ul style="list-style-type: none"> <li>Hocking Electrical Conductivity Testing</li> <li>Fischer Ferrite Testing</li> <li>GAMMA-SCOUT Radiation Detector (Geiger Counter)</li> </ul>

## Services / Investigations

Testing routines on materials prior to despatch to provide customers with additional quality assurance beyond that required by standard ISO 9001 quality systems.

Positive Material Identification (PMI) or a more complicated chemical analysis and mechanical testing programme to provide complete conformance to specification testing.

Material batch testing witnessed by an outside inspection Agency such as Lloyds Register of Shipping to ensure material traceability and integrity.

Investigations into materials failing to perform as expected during machining, welding or anodising. Solutions can often be found very quickly without having to rely on the technical expertise provided by the material manufacturer.

Advice on material/alloy selection, obsolete and unusual specifications and support for customers when drafting their own material specifications.

We are accredited by UKAS Quality Management (1930)