

Materials Testing



Physical Testing

Physical properties of materials can be obtained to ensure consistency of production, assess the effects of environmental exposure and the performance of a material against a customer specification or to assess efficacy of new or alternative raw materials. Covering:

- Most physical testing for rubber and non-rubber materials
- Non ambient temperature air, UV and fluid ageing facilities

Chemical / Analytical Testing

Chemical analysis can be used to assess raw materials, troubleshoot production problems and benchmark competitor products. We are highly experienced in:

- Hot and cold extraction visible light spectroscopy
- Gas Chromatography (GC), Thin Layer Chromatography (TLC)
- Thermogravimetric (TGA) / DSC analysis
- Transmission infra red / FTIR surface infra red analysis

Specialist Testing

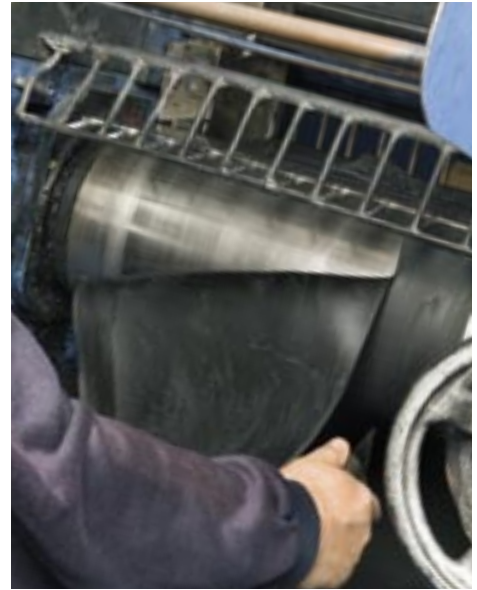
Our specialist test facilities allow generation of engineering design data, evaluation of product functionality, shear-flow rheological characteristics and the dynamic mechanical evaluation of materials.

- Capillary and Biconical rheometers for flow evaluation
- Optical and Scanning Electron Microscopy (SEM) with EDX capability.
- Flexible and versatile tensile tester with environmental chamber for high and low temperature work
- Stress relaxation tester
- Triton dynamic mechanical test machine (DMA)
- Galvanic corrosion measurement
- Milk breakdown and fat absorption
- Chipping and chunking of rubber
- Constant load fatigue
- Permeation characterisation - membrane / immersion methodology

Compound Supply / Mixing

Lab mixing facilities allow economical evaluation of development rubber compounds and supply for small quantity production and prototype sample moulding. Standard reference materials can also be produced to ISO 13226. Evaluation of cure and low shear rate flow behaviour is also available.

- 1.6L Banbury rubber mixer
- Brabender torque rheometer with extruder and Z blade mixer
- Lab scale 13" / 18" 2-roll mills with cooling / heating
- 80 tonne hot compression presses
- 20 tonne water cooled press
- 3 bowl lab calendar
- Alpha technologies MDR / Mooney rheometers



Consultancy

With vast experience in dealing with live manufacturing and technical problems, ARTIS is ideally placed to help you solve any issues you may have in these areas.

We also have staff qualified to act as expert witnesses in mediation and legal cases.

For further information please contact:

ARTIS

Unit 5, Brook Lane Industrial Estate
Westbury, Wiltshire
BA13 4EP UK

Tel: +44 (0)1373 863000
Fax: +44 (0)1373 863001

www.artis.uk.com
info@artis.uk.com

ARTIS is a business of Avon Polymer Products Limited, a company registered in England with number 149360 with its registered office at Hampton Park West, Semington Road, Melksham, Wiltshire SN12 6NB.
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