Excellent Rubber Testing Services

We have combined the science of laboratory analysis and technical problem solving on a broad range of materials--especially polymer & Rubber products. Our services extend beyond the standard chemical and physical testing required to meet industry and government specifications, and includes technical, performance evaluations, and failure analysis. Hundreds of manufactured products are routinely tested using a wide variety of analytical methods and wet chemistry techniques to identify and quantify constituent materials

As a rule of thumb, higher performance and higher temperature usage specification means higher cost products and more careful and complex testing is required

Tests performed by us are

- Tear strength
- Tensile strength
- Hardness
- Determination of carbon black
- Compression set in room temperature, heat and cold
- Ozone testing
- Chemical analysis
- Resistance to liquids (volume change, weight change, hardness change and change in tensile properties
- Accelerated ageing in heat, UV and climate
- We can also perform customized tests for specific needs. We can also make qualitative and quantitative analyses to determine the composition of a rubber materials
- Elongation
- Charpy Impact
- Izod Impact
- Modulus of elasticity
- Density & Specific gravity l
- Flammability
- Flexural properties

High Quality Through High Tech Instruments

- FTIR (Fourier Transform Infrared Spectrophotometer) - Determines chemical make-up of rubber compounds both before and after molding, in a matter of minutes. This ensures the consistency of rubber compounds
- Thermogravimetric Analyzer (TGA) - Accurately determines the relative chemical content of materials and their thermal stability at temperatures up to 1,000°C. Completely computer controlled, the TGA delivers unequaled accuracy for material analysis.
- DSC - Differential Scanning Calorimeter - Measurement of temperature and heat flow associated with transition points in materials as a function of time and temperature Through DSC we measure Melt point, Crystallinity, % purity etc.

Testing Necessity

Testing of the rubber is necessary to trace out the short falls in processing methods, to control and maintain the quality of the products and to undertake research and development work. The quality of the finished products depends not only on the quality of the starting materials but also on the correct operation of the various processing steps.

To assess the quality and to maintain uniformity in quality of the products regular testing is must.

The manufacturer has to assure himself that the product that he has made, meets the limits imposed by the specifications. Laboratory tests and actual performance tests help the manufacturer to assess and maintain the quality of the products he makes.

For the R&D work, testing is done to understand the behavior, nature and effect on the properties of the compounding ingredients. As a result of the evaluation of such test results, new polymers or compounding ingredients which may be less costly or having better properties may be evolved.

The design of the product also equally affects the final performance. Hence the tests that are done on the products, to evaluate their service life, should include the basic tests and accelerated performance tests. The important basic tests done are the Stress train tests, ageing tests, hardness tests, low temperature tests, tear tests etc.

The tests which are related to the performance tests are abrasion tests, compression tests etc. laboratory tests help to get a comparative performance data of different compounds and designs when they are used under identical conditions

Major Equipments

- ▸TG/DSC
- ▸FTIR
- ▸AAS
- ▸HPLC
- ▸XRF
- ▸Colour comparison meter
- ▸GCMS
- ▸ICP
- ▸Gas Chromatography

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