



AKRON RUBBER DEVELOPMENT LABORATORY, INC.

Adhesives and Sealants Services and Capabilities

ARDL's experts provide full support for multiple industries by assisting with technical problems and product development for adhesives, sealants and related products.

We service Adhesives and Sealants manufacturers and end users in all aspects of their product quality and performance as described below:

SERVICES

- Technical Consultancy
- Testing Services
- Reverse Engineering
- Quality Control Services
- Product Development
- Failure Analysis
- Formulations
- Process Technology



TEST EQUIPMENT

- Adhesion Testers
- Tack Testers
- Shear Testers
- Release Testers
- Lab Coaters
- Benchtop Laminator
- Analytical Equipment

TESTING

- Testing Done as per ASTM, EN, BS, ISO and Various Other Standards
- Customer Specified Tests
- Verification of Raw Materials
- Product Specifications
- Environmental Aging
- Quality Control
- Performance Testing and Evaluation

CAPABILITIES

- Derive testing plans to carry out necessary tests to provide solutions to specific customer problems
- Conduct all tests as per ASTM, ISO, EN, BS and customer SOP
- Environmental aging tests, including resistance to low and high temperatures, UV light, humidity and water
- Quality control, with results supplied swiftly, enabling customers to make decisions regarding shipping of materials
- Collaborate with universities and established laboratories to manage a wide range of analytical tests
- All tests are carried out by our fully trained and experienced personnel, using established procedures
- Develop technical data for products needing commercialization

TESTS

The following are typical tests we conduct for customers needing support in resolving quality and performance issues:

- Peel Adhesion
- Adhesive Tack
- Static and Dynamic Shear
- Viscosity
- Abrasion Resistance
- Coefficient of Friction
- Porosity
- Smoothness
- Surface Energy
- Tensile & Elongation



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Adhesives and Sealants Services and Capabilities (cont.)

CHEMICAL ANALYSIS

We have state-of-the-art analytical equipment to perform various chemical tests as well as the reverse engineering of adhesives and sealants. In this process, we analyze the composition of matter by:

Spectroscopy - Chemical Structures

- FTIR
- UV/Visible

Microscopy - Surface Topography/Analysis

- LOM
- SEM/EDX
- TEM

Chromatography - Separations/Structures

- HPLC
- GC/MS
- GPC
- LC/MS
- Pyro-GC/MS

Thermal Analysis - Thermal Properties

- DMA
- TMA
- TGA
- DSC

Elemental Analysis - Composition

- Graphite/Muffle Furnace - Ash Content
- Elemental Analysis - ICP/MS, C,H,N,S (Leco)

TECHNICAL CONSULTANCY

ARDL provides producers and consumers of adhesives and sealants full technical and quality support. Our knowledge and experience of adhesives, sealants and related products enables us to provide expertise to assist companies in overcoming technical obstacles and developing new products.

We have fully equipped laboratory facilities and are able to support our clients as an independent technical extension of their own team. Our typical consultancy projects cover the following areas:

- Technical Support - Product Quality and Processes
- Technical Assistance - Manufacturing Support
- Cost Reduction and Quality Improvement
- Raw Materials
- Formulations
- Product Development
- Process Analytical Support
- Reverse Engineering
- Failure Analysis

CUSTOMER SERVICES

We use the resources of our experienced experts to troubleshoot and solve our customers' problems. We utilize a full range of internal analytical procedures for the evaluation of:

- Adhesives
- Organic/Inorganic Chemicals
- Coatings
- Polymers
- Sealants
- Our clients range from small companies with no technical facilities, to large multinationals, who require assistance for specific projects.
- All work is treated confidentially and projects may be initiated after signing confidentiality agreements.



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