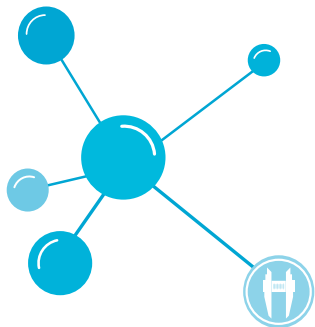


Seal Analysis Lab

Seal Analysis Lab



Our Seal Analysis Lab plays an important role in the engineering services we offer. It is a step forward in the continual advancement of our quality control program and unique services. The Lab contains a variety of equipment that allows our engineers, drafting technicians, and quality control staff to perform various seal related testing.

Detailed Inspection Report

Our lab employs two optical comparator machines, a Micro-Vu Matrix and Micro-Vu Excel. This inspection equipment allows us to quickly and reliably measure components to a high level of accuracy. The Matrix is a manually operated system used to inspect smaller quantities or more intricate parts. The Excel is an automated system, capable of consecutively measuring multiple components and inspection of parts approximately two times larger than what the Matrix can measure.

Our staff use both devices to perform detailed inspection of products to determine if they are within provided specifications. This information is often turned into a report for our customer's use.



Mid-Infrared FT-IR Spectrometer

Failure Analysis Report

Our failure analysis report (FAR) examines and analyzes seals or gaskets and the environment in which it failed. This allows us to determine the most likely cause(s) of the failure. Once the cause(s) has been determined, suitable recommendations that will optimize future performance are presented.

We perform the analysis with a failed part sample and application information. If a sample cannot be provided, a picture and a detailed description of the part, application, and environment is needed.

Positive Material Identification

We perform positive material identification (PMI) on elastomeric, plastic, and metal materials. To identify elastomer and plastic materials we utilize a mid-infrared FT-IR spectrometer. The FT-IR spectrometer analyzes the molecular structure of a material to determine the base polymer type.

For sample size requirements or other PMI information, please contact us at engineering@hitechseals.com

Additional Testing and Analysis

Our Seal Analysis Lab can perform a variety of additional tests and general analysis using our state-of-the-art equipment including;

- Tensile Strength
- Tensile Modulus
- Specific Gravity
- Face Flatness
- Elongation
- Heat-aging Testing
- Hardness Testing
- Compression Set



Tensile Tester