



ICP ESCA TGA  
GC MS NMR XRF  
GPC DSC  
FTIR SEM TEM

Service  
Solutions

DOW CORNING

# Analytical Solutions

## Do You Need **Thermal Analysis Services** to Characterize Material Properties?

Dow Corning Analytical Solutions offers a range of thermal analysis capabilities to characterize various material properties as a function of temperature. This type of information is helpful in selecting suitable materials for an application or for determining why one material behaves differently than another material. We have practical experience analyzing a wide variety of materials including polymers, composites, resins, gels and powders.

### Thermal Analysis Capabilities:

#### Thermogravimetric Analysis (TGA)

TGA measures the amount and rate of change in weight of a material as a function of temperature or time. TGA can characterize materials that exhibit weight loss or gain due to decomposition, oxidation or dehydration.

#### Differential Scanning Calorimetry (DSC)

DSC measures the temperatures and heat flows associated with transitions in materials as a function of time and temperature. DSC measurements provide information about physical and chemical changes that include heat capacity, glass transitions, melts and cure.

#### Thermomechanical Analysis (TMA)

TMA measures linear changes in sample dimension as a function of time, temperature and force. TMA provides linear coefficient of thermal expansion (CTE), resin softening and glass transition temperature information.

#### Dynamic Mechanical Analysis (DMA)

DMA measures the modulus and damping properties of materials as they are deformed under stress. DMA measurements provide information about the performance of materials including glass transition, rate and degree of cure, creep and stress relaxation.

#### Pyrolysis Gas Chromatography - Mass Spectrometry (GC-MS)

Pyrolysis GC-MS provides the capability to heat materials to high temperatures (up to 800°C) under inert or air atmospheres and identify evolved volatile species and thermal degradation products.



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## Flashpoint Testing

Flashpoint is the lowest temperature at which a liquid can form an ignitable mixture in air near the surface of the liquid. We offer the following flashpoint testing:

- Seta Rapid Flash Closed Cup Tester
- Cleveland Open Cup
- Tag Closed Cup
- Pensky-Martens Closed Cup

## Additional Capabilities:

In addition to Thermal Analysis, we offer the following capabilities to meet your analysis needs:

- Molecular Spectroscopy (Raman, IR, NMR)
- Chromatography (GPC, IC, GC)
- Mass Spectrometry (GC-MS, LC-MS, FT-MS, MALD-TOF-MS, GC-TOF-MS)
- Microscopy (optical, AFM, SEM, TEM)
- Surface (XPS, contact angle, interferometry)
- Elemental (WDXRF, ICP-MS, XRD)

## Quality Accreditation:

- ISO 9001:2000 (BSI FM 10734)

## How to contact us:

For further information, to request a quote or discuss how we can help you:

- Visit our website:  
*www.dowcorning.com/analytical*
- Email us:  
*analytical.solutions@dowcorning.com*
- Call us:  
Technical Contacts  
United States 1-877-dcc-test (1-877-322-8378)  
Belgium 32-64888239  
United Kingdom 44-1446-723430  
Japan 81-436-22-5966

Product Customer Service 1-800-248-2481



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ISO 9001  
FM10743

### LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

Dow Corning expressly warrants for a period of ninety (90) days following completion of any service that the service was performed in accordance with generally accepted practices and procedures or, if applicable, practices or procedures developed by Dow Corning. Dow Corning's sole responsibility under this limited warranty is to re-perform any service or refund the fees paid to Dow Corning for such services if client notifies Dow Corning within 90 days of performance of the service.

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