

ManTech

**Analytical Testing Services
Commercial Price List
ManTech International Corporation
January 2018**

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Note:

Test pricing includes an analytical report in electronic format containing all test data.

Mechanical Tensile Testing				
Test	Property	Instrument		
Tensile Test	Tensile Strength; Elongation at Break; Elastic Modulus; Yield Strength; Peel Strength, Seal Strength	Instron Model 5569: Two-Column Table Mounted Universal Materials Testing System with Environmental Chamber Supporting -120 °C to +300 °C.		
Standards Reference		Option	Samples/ Test	Price
Setup Fee – Room Temperature		Required; once per batch if testing conducted at RT	1	\$250
Setup Fee – Below Room Temperature		Required; once per batch if testing conducted below RT	1	\$450
Setup Fee – Above Room Temperature		Required; once per batch if testing conducted above RT	1	\$350
ASTM D638-10, D882-02, D3528-96, D1002-05, D1938-08; F88/F88M-15; D903-98		Ambient temperature (~23 °C)	Up to 5	\$250
ASTM D638-10, D882-02, D3528-96, D1002-05, D1938-08; F88/F88M-15; D903-98		Above Room Temperature (24 °C to 150 °C)	Up to 5	\$300
ASTM D638-10, D882-02, D3528-96, D1002-05, D1938-08; F88/F88M-15; D903-98		Above Room Temperature (151 °C to 300 °C)	Up to 5	\$400
ASTM D638-10, D882-02, D3528-96, D1002-05, D1938-08; F88/F88M-15; D903-98		Below Room Temperature (-60 °C to 22 °C)	Up to 5	\$525
ASTM D638-10, D882-02, D3528-96, D1002-05, D1938-08; F88/F88M-15; D903-98		Below Room Temperature (-120 °C to -60 °C)	Up to 5	\$625

Differential Scanning Calorimetry (DSC)				
Test	Property	Instrument		
DSC Scan	Glass Transition Temperature (T_g); Melting Temperature (T_m); Crystallization Temperature (T_c)	TA Instruments Model Q200 Modulated Differential Scanning Calorimeter (DSC) with -50 °C to +725 °C temperature capability; mass flow control; RCS90 refrigerated cooling system; gas dryer.		
Standards Reference		Option	Samples/ Test	Price
Setup Fee		Required; once per batch	1	\$300
ASTM D7426-08; D3418-08; E1356-08		Duplicate Scan Up to 100 °C 10 °C/min or Higher Rate	1	\$300
ASTM D7426-08; D3418-08; E1356-08		Duplicate Scan Up to 300 °C 10 °C/min or Higher Rate	1	\$360
ASTM D7426-08; D3418-08; E1356-08		Duplicate Scan Up to 500 °C 10 °C/min or Higher Rate	1	\$420

Thermomechanical Analysis (TMA)				
Test	Property	Instrument		
TMA Scan	Coefficient of Thermal Expansion (CTE); Glass Transition Temperature (T _g); Creep; Modulus, Tan Delta	TA Instruments Q400EM Thermomechanical Analyzer (TMA) with Mass Flow Control; Modes of operation include temperature ramp, isostrain, force ramp, stress ramp, strain ramp, isostrain, creep, stress relaxation, dynamic TMA, and modulated TMA; Temperature Range is -150 °C to +1000 °C; automated furnace and probe movement, automated sample dimension measurement, and automated air-cooling; Quartz sample stage; Available probes include standard expansion probe, penetration probe, macro expansion probe; Film and fiber accessory kit; 3 point bend probe.		
Standards Reference	Option	Samples/ Test	Price	
Setup Fee	Required; once per batch	1	\$300	
ASTM E831-06	Duplicate Scan Up to 100 °C 10 °C/min or Higher Rate	1	\$300	
ASTM E831-06	Duplicate Scan Up to 300 °C 10 °C/min or Higher Rate	1	\$360	
ASTM E831-06	Duplicate Scan Up to 500 °C 10 °C/min or Higher Rate	1	\$420	
Case Specific Creep	Initial Creep Test Setup Minimum Temp 40 °C range	1	\$1,250	
Case Specific Creep	Initial 24 hour test Single Scan Minimum Temp 40 °C range	1	\$1,250	
Case Specific Creep	Each additional 24 hour Single Scan Minimum Temp 40 °C range	1	\$600	

Dynamic Mechanical Analysis (DMA)				
Test	Property	Instrument		
DMA Scan	Storage Modulus (E'); Loss Modulus (E''); Tan Delta; Glass Transition Temperature (T _g)	Rheometrics DMTA Mark V Dynamic Mechanical Thermal Analyzer (DMA); Modes of operation include single cantilever, dual cantilever, three point bend, shear, or extension modes; Temperature sweep range is -75 °C to +500 °C; frequency sweep or stress sweeps are also available		
Standards Reference		Option	Samples/ Test	Price
Setup Fee		Required; once per batch	1	\$325
Case Specific		Call	1	Call

UV/Vis/NIR Spectrophotometry				
Test	Property	Instrument		
UV/Vis/NIR Scan	Ultraviolet (UV), Visible, and Near Infrared (NIR) Transmission, Reflection, Absorption	Perkin-Elmer Model Lamda 950 Spectrophotometer with spectral range 175 –3300 nm complete with spectralon-coated integrating sphere (250–2500 nm) for true reflectance and transmission measurements.		
Standards Reference		Option	Samples/ Test	Price
Setup Fee		Required; once per batch	1	\$250
In-House Procedure		Film Scan Trans. or Refl. 500 nm Range	1	\$250
In-House Procedure		Film Scan Trans. or Refl. Full 250-2500 nm Range	1	\$360
In-House Procedure		Liquid Scan - Trans. Only 500 nm Range	1	\$250
In-House Procedure		Liquid Scan - Trans. Only Full 175-3300 nm Range	1	\$360
In-House Procedure		Data Analysis, Reduction for Solar Optical Values (τ_s , ρ_s , α_s) for AM0 or AM1.5	1	\$150

Fourier Transform Infrared Spectroscopy (FTIR)				
Test	Property	Instrument		
FTIR Scan	Infrared Transmission, Reflection, Absorption	Bruker Model Tensor 27 Fourier Transform Infrared Spectrometer with Spectral range 1 - 25 μm , complete with gold-coated integrating sphere for true reflectance and transmission measurements.		
Standards Reference		Option	Samples/ Test	Price
Setup Fee		Required; once per batch	1	\$350
In-House Procedure		Film Scan Trans.or Refl.	1	\$350
In-House Procedure		Liquid Scan Transmission Only	1	\$350
In-House Procedure		Solid Pellet Scan Transmission Only	1	\$450

Infrared Emissivity				
Test	Property	Instrument		
Emissivity Scan	Hemispherical or Normal Infrared Emittance / Infrared Emissivity	AZ Technology Temp 2000A Emissometer/reflectometer measures total hemispherical reflectance, <3 to >35 micrometers wavelength. Provides both normal and hemispherical 300k (ambient) emittance measurements. The recognized replacement for the no longer produced Gier Dunkle DB 100 IR Reflectometer, with improved performance and maintainability and in accordance with the ASTM E408 standard.		
Standards Reference		Option	Samples/ Test	Price
Setup Fee		Required; once per batch	1	\$250
ASTM E408-71		IR Emittance Hemispherical or Normal	Up to 5	\$150

Electrical Resistivity				
Test	Property	Instrument		
Resistivity Measurement	Surface or Bulk Electrical Resistivity	Prostat PRS-812 resistance meter coupled with Prostat PRF-911 concentric ring fixture or PRF-912B miniature concentric ring fixture		
Standards Reference		Option	Samples/ Test	Price
Setup Fee		Required; once per batch	1	\$200
ASTM D257-07		Surface Resistivity 10 ¹ -10 ¹² ohms/sq range	Up to 3	\$175
ASTM D257-07		Volume Resistivity - 10 ¹ - 10 ¹² ohms range	Up to 3	\$175

Surface Profilometry				
Test	Property	Instrument		
Surface Profilometry	Step Height 3-D Surface Profile	Bruker Dektak 150 Surface Profiler with automated sample stage. 150 x 150 mm X-Y scan capability with sample thicknesses up to 1 mm.		
Standards Reference		Option	Samples/ Test	Price
Setup Fee		Required; once per batch	1	\$350
In-House Procedure		2-D Step Height Measurement	1	\$250
In-House Procedure		3-D Surface Mapping	1	\$1,500

Consulting				
Test	Property	Instrument		
Additional Consulting	General Consulting	Consulting Services with Ph.D. Analytical Laboratory Manager		
Standards Reference	Option	Time	Price	
N/A	Consulting Per Hr	1 hr	\$200	

Volume Testing Discounts

Pricing discounts are available for multiple samples, please inquire for more information.

Contact Information

For any questions or for additional information, please contact:

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