THERMAL ANALYSIS

_	TA264	Brochure: Q Series™ DSC
_	TA263	Brochure: Q Series™ TGA & SDT
_	TA284	Brochure: Q Series™ DMA
_	TA028	Brochure: TMA 2940
_	TA057	Brochure: DEA 2970
_	TA243	Brochure: µTA 2990
_	TA098	Brochure: TGA-Mass Spectometer System
_	TA221	Brochure: Thermal Analysis & Rheology Systems Product Overview
_	TA256	Brochure: Thermal Advantage Software
_	TA006	Product Bulletin: Mechanical Cooling Accessory for TMA 2940
_	TA202	Product Bulletin: Certified Calibration Standards
_	TA023	Thermal Analysis Review: High Resolution TGA- Theory & Applications
_	TA237	Modulated Thermogravimetric Analysis: A New Approach for Obtaining Kinetic Parameters
_	TA211	Thermal Analysis Review: Modulated DSC® Theory
_	TA210	Thermal Analysis Review: Modulated DSC® Compendium - Basic Theory and Experimental Considerations.
_	TN035	Installation Requirements
_	RN017	Rheology Literature List

TECHNICAL PUBLICATIONS

_	TA290	Determining Percent Solid in an Edible Fat
_	TA289	Evaluation of Fiber Heatsetting by MDSC
_	TA287	Time-Temperature Superposition Using DMA Creep Data
_	TA286	Determining Percent Solid in a Polymer Blend

_	TA285	How Tzero™ Technology Improves DSC Performance, Part VI: Simplifying Temperature Calibration for Cooling Experiments
_	TA283	How Tzero™ Technology Improves DSC Performance, Part V: Reducing Thermal Lag
_	TA282	How Tzero™ Technology Improves DSC Performance, Part IV: MDSC Enhancement
_	TA281	Tzero™ DSC and Peak Shape of First Order Transitions
_	TA280	Isothermal Crystallization Using the Q Series™ DSC and Liquid Nitrogen Cooling System
_	TA279	How Tzero™ Technology Improves DSC Performance, Part III: The Measurement of Specific Heat Capacity
_	TA278	How Tzero™ Technology Improves DSC Performance, Part II: Peak Shape and Resolution
_	TA277	Characteristics of Tg Detection Using Micro Thermomechanical Analysis
_	TA276	Determination of Polymer Crystal Molecular Weight Distribution by DSC
_	TA275	Impact of Tzero™ Technology on the Measurement of Weak Transitions
_	TA274	Impact of Tzero™ Technology on DSC Resolution
_	TA273	Design of a New DSC Cell with Tzero™ Technology
_	TA272	How Tzero™ Technology Improves DSC Performance, Part I: Flat Baseline and Glass Transition Measurements
_	TA269	DSC Resolution and Dynamic Response Improvements Obtained by a New Heat Flow Measurement Technique
_	TA268	DSC Baseline Improvements obtained by a New Heat Flow Measurement Technique
_	TA267	High Heating Rate Modulated DSC® Using Tzero™ DSC Technology
_	TA266	Practical Benefits of Using Heat Capacity Versus Heat Flow Signals
_	TA265	Precision and Bias of the ASTM Test E1952 for Thermal Conductivity by Modulated DSC
_	TA258	Characterization of Surface Morphology Changes by Micro-Thermal Analysis
_	TA257	Micro-Thermal Analysis - An Holistic Approach to Materials Characterization
_	TA253	Kinetic Parameters of Overlapping Coal Decomposition Reactions by MTGA™

_	TA250	Determining Volatile Organic Carbon by Differential Scanning Calorimetry
_	TA248	Recent Developments in the Application of Thermal Analysis to Polyolefins
_	TA246	Time-Temperature Superposition
_	TA238	Evaluation of Hazards Potential by DSC
_	TA231	TGA Evaluation of Zeolite Catalysts
_	TA227	Characterization of Melting Phenomena in Linear Low Density Polyethylene by Modulated DSC®
_	TA226	Characterization of a Polycarbonate/Polyetherester Blend Using Modulated DSC®
_	TA144	Application of Time-Temperature Superposition Principles to DMA
_	TA143	A Comparison of Commercially Available DSC Kinetic Methods for Evaluating Bismaleimide Resins
_	TA142	Characterization of the Phase Behavior of Polymer Blends Using DEA
_	TA141	High Resolution TGA/Mass Spectroscopy Characterization of Fuel Oil Transport Additives
_	TA138	The Correlation of TMA with ASTM Modulus Data
_	TA137	Detection of the Glass Transition in Metal Glasses by DSC and DMA
_	TA136	Evaluation of Metal Catalysts
_	TA135	Use of TGA to Distinguish Flame-Retarded Polymers from Standard Polymers
_	TA134	Kinetics of Drying by TGA
_	TA133	Measurement of Moisture Effects on the Mechanical Properties of 66 Nylon
_	TA132	Oxidative Stability of Oils and Greases
_	TA131	Detection of Beta Transus in Titanium Alloys by DTA
_	TA130	Polypropylene Impact Resistance by DMA
_	TA129	Proximate Analysis of Coal and Coke
_	TA128	Polyester Heat History Detection by DSC
_	TA127	Differentiation Between Grades of ABS by Hi-Res™ TGA
_	TA126	Gelation of Epoxy-Glass Prepreg by Parallel Plate Rheometry

_	TA125	Estimation of Polymer Lifetime by TGA Decomposition Kinetics
_	TA124	Evaluation of Moisture Effects on the Dielectric Properties of Polymer Films
_	TA123	Determination of Polymer Crystallinity by DSC
_	TA122	Determination of Carbon Black Pigment in Nylon 66 by TGA
_	TA121	Oxidative Stability of Polyethylene Terephthalate
_	TA120	Transition Temperature of Liquid Samples by TMA
_	TA119	Dynamic Mechanical Analysis of Food Products
_	TA118	Calculation of Energy of Activation from Dielectric Studies
_	TA108	Determination of Layer Thickness in Multilayer Packaging Films
_	TA107	Characterization of Ethylene Vinyl Acetate Copolymers by DEA
_	TA106	Effects of Beta-Alkyl Substitution on the Dielectric Properties of Polymethacrylates
_	TA105	Characterization of Phenolic Fiberglass Resins by DEA
_	TA104	Characterization of PEEK Film Using Dielectric Analysis
_	TA103	Characterization of the Cure of High Temperature Urethane Resins by DEA
_	TA102	Characterization of PMMA by DEA
_	TA101	Characterization of the Cure Reaction of Silicone Potting Compounds by DEA
_	TA100	Characterization of the Cure of Low Temperature Urethane Adhesive Resin by DEA
_	TA073	A Review of DSC Kinetic Methods
_	TA049	DSC Dynamic Calorimetric Purity
_	TA039	Interpreting Unexpected Events and Transitions in DSC Results
_	TA034	Testing Laboratories for Thermal Analysis
_	TA271	“Improved DSC Performance Using Tzero™ Technology” R. Danley, T. Kelly, J. Groh
_	TA270	“Turning Up the Heat”, THE SUPPLY LINE
_	TA252	“Recent Progress in Microthermal Analysis, M. Reading, D. M. Price, H. P. Pollack, A. Hammiche, A. Murray, AMERICAN LABORATORY

_	TA251	“Obtaining Kinetic Parameters by Modulated Thermogravimetry”, R. L. Blaine and B. K. Hahn, JOURNAL OF THERMAL ANALYSIS
_	TA249	“Using Microthermal Analysis to Characterize the Nanoworld”, T. J. Lever, D. M. Prince, AMERICAN LABORATORY
_	TA247	“Micro-Thermal Analysis: A New Form of Analytical Microscopy”, D. M. Price, M. Reading, A. Caswell, A. Hammiche, H. M. Pollock, MICROSCOPY AND ANALYSIS
_	TA245	“A Faster Approach to obtaining Kinetic Parameters”, R. L. Blaine, AMERICAN LABORATORY
_	TA244	“Thermal Analysis for the 21st Century”, M. Reading, D. J. Houston, M. Song, H. M. Pollock, A. Hammische, AMERICAN LABORATORY
_	TA236	“Dynamic Mechanical Analysis of Polymers”, J. Foreman, AMERICAN LABORATORY
_	TA235	“Oxidative Induction Time - A Review of DSC Experimental Effects”, R. L. Blaine, C. J. Lundgren, M. B. Harris
_	TA233	“A Proposed Reference Material for Oxidative Induction Time by Differential Scanning Calorimetry”, R. L. Blaine, Mary B. Harris
_	TA230	“ Heat Capacity Measurements Using Quasi-Isothermal MDSC®”, L. C. Thomas, S. R. Aubuchon
_	TA229	“Dynamic Mechanical Analyzers: How Do They Work?” J. A. Foreman and K. Reed
_	TA228	“Estimation of Bias in the Oxidation Induction Time Measurement by Pressure DSC”, S. M. Marcus, R. L. Blaine
_	TA220	“Coatings Characterization by Thermal Analysis”, C. M. Neag, ASTM MANUAL 17
_	TA219	“Modulated DSC® Evaluation of Isothermal Cure and Vitrification for Thermoset Systems”, B. Van Mele, G. Van Assche, A. Van Hemelrijck, H. Rahier.
_	TA218	“Calorimetric and Rheology Investigation of Modified Polypropylenes”, J. A. Foreman, R. Smith, R. L. Blaine
_	TA217	“Optimization of Lyophilization (Freeze-Drying) Using Dielectric Analysis DEA”, S. A. Evans, K. Morris
_	TA208	“The Property-Performance Differences Between Two Blended Polypropylene Fibers”, J. A. Foreman, K. A. Klinger, M. Wolkowics
_	TA201	“Differential Scanning Calorimetry for Boiling Points and Vapor Pressure”, K. Jones, R. J. Seyler

_ TA139 “Applications of Material Characterization in an Electronics Manufacturing Environment”, P.A. Caufield

_ TA090 “Measurement of the Physical Properties of Engineering Thermoplastics Using Thermal Analysis”, J. A. Foreman, C. J. Lundgren, P. S. Gill

_ TA086 “Thermal Conductivity of Polymers, Glasses and Ceramics by Modulated DSC®”

_ TA085 “High Pressure Oxidative Induction Time Analysis by DSC”

_ TA083 “Analysis of Elastomer Vulcanizate Composition by TG-DTG Techniques”, A. K. Sircar

_ TA082 “Exploring the Sensitivity of Thermal Analysis Techniques to the Glass Transition”, J. A. Foreman, S. R. Sauerbrunn, C. L. Marcozzi

_ TA081 “The Case for a Generic Definition of Differential Scanning Calorimetry”, R.L. Blaine

_ TA075 “Decomposition Kinetics Using TGA”, S. R. Sauerbrunn, P. S. Gill

_ TA072 “Modulated Differential Scanning Calorimetry”, S. R. Sauerbrunn, B. S. Crowe, M. Reading

_ TA070 “Dynamic Mechanical Analysis - A Versatile Technique for the Viscoelastic Characterization of Materials”, I. F. Groves, T. J. Lever, N. A. Hawkins, INTERNATIONAL LABMATE

_ TA052 “Development of a New Oxidation Stability Test Method for Greases Using a Pressure Differential Scanning Calorimeter” In-Sik Rhee, NLGI SPOKESMAN

_ TA038 “Tensile Modulus of Plastic Films”, J. A. Foreman, P. S. Gill, S. R. Sauerbrunn

_ TA037 “Differential Photocalorimetry: Advancements for the Analysis and Characterization of Free Radical, Cationic and Hybrid Photopolymers”, S. R. Sauerbrunn, D. C. Armbruster, P. D. Shickel

_ TA036 “Using Temperature to Control Quality”, R. L. Hassel, PI QUALITY

THERMAL ANALYSIS APPLICATIONS NOTES

_ TN048 Polymer Heats of Fusion

_ TN047 Using the Heater PID Method Segment

_ TN046 ISO Thermal Methods

_ TN045 Choosing Conditions in Modulated DSC®

_	TN044	Purge Gas Recommendations for Use in Modulated DSC®
_	TN041	Choosing Proper Tubing for Purge Gas Connections
_	TN040	Optimizing Stepwise Isothermal Experiments in Hi-Res™ TGA
_	TN039	Thermal Analysis Reference Books
_	TN036	High Resolution TGA™ Helpful Hints
_	TN035	Installation Instructions
_	TN034	Modulated DSC®: A Simple Technique with Significant Benefits
_	TN031	Calibration of TMA According to ASTM Standard Method E831
_	TN030	Determining Minimum Usable Sample Thickness in TMA
_	TN027	Guidelines for Performing DMA Creep Experiments
_	TN026	Common Metric Conversions
_	TN025	Utilizing the Event Switch
_	TN024	TGA Temperature Calibration Using Cure Temperature Standards
_	TN021	ASTM Thermal Methods
_	TN020	Automated Analysis of Specific Heat/Cool Segments in DSC Cyclic Experiments
_	TN018	Guide for Choosing DSC Pans
_	TN017	Experimental Considerations for Thermal Conductivity by MDSC®
_	TN015	Literature Values for Water Specific Heat Capacity
_	TN014	Simulating DTUL (ASTM D648) Experiments with the TMA
_	TN011	Enthalpy of Melting for Standards
_	TN010	Standard Terminology for Abbreviated Terms Relating to Plastics, ASTM D1600
_	TN008	Sapphire Specific Heat Capacity Literature Values
_	TN007	Enhances DSC Glass Transition Measurements
_	TN005	Boiling Point and Vapor Pressure Measurements by Pressure DSC
_	TN002	Hints for Good Purity Determinations
_	TN001	DSC Cell Cleaning

THERMAL SOLUTIONS

_	TS084	Using High-Volume Sample Pans to Characterize the Curing Reaction of a Phenolic Resin Sample
_	TS083	Glass Transition Temperature of a Polymer (Polyamide) Blend Using MDSC®
_	TS082	Identification of Different Crystalline Forms of Sorbitol by DSC
_	TS081	Two Phase Polymer System Studied by Temperature Dependent Pulsed Force Microscopy and Force versus Distance Curves
_	TS080	Characterization of an Epoxy Resin Compound by MDSC®
_	TS079	Characterization of EPDM Rubber by TGA and Hi-Res™ TGA
_	TS075	Characterization of the Glass Transition Temperature of Petroleum Pitch by MDSC®
_	TS074	Cure Variation Across a Tmeroset Layer as Detected by ❍TA
_	TS073	Nylon 6,6 Characterization by MDSC®
_	TS071	Characterization of a PTFE/PEEK/Carbon Fiber Blend by TGA and Hi-Res™ TGA
_	TS070	PTFE/PEEK/Carbon Fiber Blend Analysis by DSC
_	TS069	Characterization of a Polyester Resin/Catalyst System by TGA, DSC and DMA
_	TS068	Determination of Crystallinity of a Common Automotive Thermoplastic
_	TS067	Characterization of an Acrylic/Melamine Copolymer Blend by DSC and DMA
_	TS066	Characterization of Epoxy Reinforced Glass by DSC and DMA
_	TS065	Characterization of EPDM Rubber by DSC and DMA
_	TS064	Measurement of the Glass Transition Temperature Using DMA
_	TS063	Determining the Optimum Sample Size for Testing of Films by DMA
_	TS062	Effect of Frequency on the Modulus and Glass Transition Temperature of PET
_	TS061	Determination of the Linear Viscoelastic Region of a Polymer Using Strain Sweep by DMA

_	TS060	Characterization of Protein Denaturation by DSC Using High Volume Sample Pans
_	TS059	Detection of High Energy Particles by Micro Thermal Analysis
_	TS058	Polymer Blend Study by Micro Thermal Analysis
_	TS057	Pharmaceutical Applications of Micro Thermal Analysis - Paracetamol Tablets Studied
_	TS056	Crystallinity Variation of a Polymer Coasted Metal Foil Detected by Micro Thermal Analysis
_	TS054	Characterization of the Degree of Cure of Thermosetting Resins by DSC
_	TS053	Polymer Melt Characterization and Reproducibility by Micro Thermal Analysis
_	TS052	Multi-Layered Polymer Film Characterized by Micro Thermal Analysis - Local Thermal Analysis
_	TS050	Characterization of a Styrene Pigment/Resin Sample by MDSC®
_	TS049	Characterization of Packaging Film Performance by DMA Creep Recovery
_	TS048	Characterization of Packaging Film Performance by DMA Storage Modulus Analysis
_	TS047	Characterization of Packaging Film Performance by DMA Creep Compliance Analysis
_	TS046	Characterization of Printed Circuit Board materials by DMA
_	TS045	Characterization of the Effect of Water as a Plasticizer on Lactose by MDSC®
_	TS044	Characterization of Semi-Crystalline Pharmaceutical Compounds by MDSC®
_	TS043	Characterization of the Glass Transition Temperature of Lactose by MDSC®
_	TS042	Subambient Characterization of Soft Foam Material by DMA
_	TS041	Characterization of Polyvinyl Chloride (PVC) by MDSC®
_	TS040	Characterization of Polyvinyl Chloride (PVC) by DMA
_	TS039	Characterization of Polyurethane by TGA and Hi-Res™ TGA
_	TS038	Characterization of Polyurethane by MDSC®
_	TS037	Determination of Curie Point Temperature by TGA
_	TS036	Characterization of Polymer Film by TMA Penetration

_	TS034	Characterization of Epoxy Prepregs by DSC
_	TS033	Determination of Oil in Rubber by Vacuum TGA
_	TS032	Analysis of Photocured Adhesives by DPC
_	TS031	Stress/Strain Evaluation of Fibers Using TMA
_	TS030	Determination of Fiber Saturation Point in Whole Wood Using DSC
_	TS029	TGA Characterization of Gypsum in Stucco
_	TS028	Investigation of the Curie Point by MDSC®
_	TS027	Oxidative Stability of Polyolefins
_	TS026	Determination of Calcium Sulfate Hydrate in Cement by DSC
_	TS025	Measurement of Aging Effects on Amorphous PET
_	TS024	Quantifying Polyethylene Terephthalate/ Polycarbonate Blends
_	TS023	Evaluation of Inorganic Phase Transitions
_	TS022	Determination of Polymer Blend Compositions
_	TS021	Detecting Crystallinity Differences in Engineering Thermoplastics
_	TS020	Determination of Initial Crystallinity by Modulated DSC®
_	TS019	Measuring and Controlling Residual Solvent Levels in Wire Coatings
_	TS018	Measurement of the Degree of Cure in Discrete Wired Circuit Boards
_	TS017	Separation of Free and Bound Water in Pharmaceuticals
_	TS016	Comparison of Elastomeric Shock Mounts (Vibration Dampers)
_	TS015	Characterization of Resin Curing Using DMA/DEA/Controlled Stress Rheology
_	TS014	Analysis of Polymer Decompositions by TGA-Mass Spectrometry
_	TS013	Clarification of Inorganic Decomposition by TGA-Mass Spectrometry
_	TS012	Evaluation of Cracking in Polymers
_	TS011	Determination of Composite Cure
_	TS010	Pigmentation Effects on Polyethylene Crystallization
_	TS009	Predicting Printed Circuit Board Delamination
_	TS008	Long Term Stability Testing of Printing Inks by DSC

_	TS007	Thermal Stability Determination of Bonded Silicas for Use in Packing Columns by TGA
_	TS006	The Characterization of a Thin Adhesive Film on a Polyester (PET) Substrate Using DEA
_	TS005	Determination of the Relative Oxidative Stability of Polyethylene Bottle Tops by DSC
_	TS004	Rapid Determination of Carbon Black in Elastomers
_	TS003	Thermal History Determination of Textured Polyester Yarns
_	TS002	Determination of the Dimensional Stability of a Thin PET Film
_	TS001	Storage Effects of Tg for Epoxy Molding Compound