



1st Quarter, 2009

Welcome to the Intertek Automotive Update newsletter. The Update is a forum for news, happenings and information in the world of Automotive Testing and Engineering. We welcome our readers' input and participation in this forum. If you have questions to be addressed in a future issue, or article suggestions, please send inquiries to icenter@intertek.com.

Intertek Now Offers Diesel Emissions Fluid (UREA) Analytical Quality Control Analysis

Intertek is pleased to now offer Diesel Emissions Fluid (DEF) analytical quality control analysis per ISO 22241-1. Also known as AdBlue in the European markets, DEF is required by many modern diesel engine applications using selective catalytic reduction (SCR) technology to reduce oxides of nitrogen from the exhaust. SCR systems are an integral part of the engine powertrain configuration, and contaminants or impurities in the DEF could cause the SCR system to malfunction or even fail. Thus, it is critical to maintain appropriate DEF quality standards as characterized in the ISO 22241-1 standard. A summary of the analysis required per ISO 22241-1 is as follows:

Method		Details
ISO 22241-2	Annex B/C ISO 12185	Urea Content (includes Biuret content below) Density at 20C
ISO 22241-2	Annex C	Refractive Index at 20C
ISO 22241-2	Annex D	Alkalinity as NH3
ISO 22241-2	Annex E	Biuret content
ISO 22241-2	Annex F	Aldehydes content
ISO 22241-2	Annex G	Insoluble Matter content
ISO 22241-2	Annex H	Phosphate (PO4)
ISO 22241-2	Annex I	Ca, Fe, Cu, Zn, Cr, Ni, Al, Mg, Na, K
ISO 22241-2	Annex J	Identity (FTIR)

For more information about Intertek's DEF analysis program, or to schedule an analysis, please email joe.franklin@intertek.com or call 210-523-4671.

New Test Capability: Abuse Testing of Lithium-Ion Batteries

Intertek can now perform abuse testing for Lithium-Ion Batteries. These tests are described in the USABC Electrochemical Storage System Abuse Test Procedure Manual (SAND99-0497), including items 3.1 Radiant Heat Test and 2.2 Drop Test. We can test cells and very large battery packs (Lithium-Ion type) for their response to a full scale hydrocarbon spill fire exposure and drop tests. Please contact icenter@intertek.com for more information or for a quote.

New Additions at Intertek's Michigan Labs

Thermal Imaging Capability

Intertek Detroit is upgrading their temperature testing and monitoring with the addition of a Thermal Imaging camera/camcorder. The FLIR A20M camera allows Intertek to take a temperature snapshot of a sample to determine the individual temperatures across the entire surface of the sample. This testing has been focused on heated glass (automotive rear window defrosters), and electrical connectors (such as battery terminals, which can see a large temperature rise when under load). However, this capability is beneficial for temperature measurements of any type of heating or electrical device, as well as for determining hot spots or cold spots on almost any kind of material or component.

DIAdem Analysis Software

Intertek Detroit has recently added the National Instruments DIAdem software analysis package to compliment existing high speed data acquisition and test automation capabilities. DIAdem allows for the analysis of millions of datapoints and multiple data files simultaneously, with automated sorting and graphing functions (in contrast, Microsoft Excel is limited to a few thousand lines of data). The DIAdem software saves hours, even days, of data "crunching" that would be required by other software. We can also provide clients with a link to plug-in viewer software, so data can be sent directly to them in the National Instruments' "TDM" format.

Strain Gauging

Intertek Grand Rapids can now perform strain gauging on a variety of different surfaces, to obtain data with regards to the performance of the product under load. This data can be used for comparison to FEA results or to identify conditions that may cause failure in the field. There are also gauge configurations that can provide analysis of residual stress introduced to the part by molding, machining, pressing, stamping, etc. Contact gr.services@intertek.com for more information on any of these new additions.

Material Characteristics Evaluation for New Polymers

Visual appearance and quality of the interior is a main priority when designing a vehicle. Environmental impact, aging and environmental testing will be necessary to fulfill all requirements and meet customer expectations. The materials need to exhibit long life with no degradation.

The continuing request for high quality materials with good performance (e.g. durability, design flexibility, weight and appearance) will lead to an on-going push for product innovation. The creation of new or improved polymers with better product characteristics is daily business for automotive material suppliers. Intertek has the facilities and knowledge to support your business during this process, by combining decades of experience with state-of-the-art equipment.

New Materials Test Lab in Shanghai, China



Intertek Automotive Services has recently announced the establishment of a full capacity material testing lab accredited by A2LA in Shanghai, China, focused on the automotive industry. Capabilities include testing of automotive materials and components, such as interior & exterior components, electronics & wire harnesses, body components, plastics, paint, rubber, tape, foam, leather, adhesives, textiles, metals, etc.

The lab offers various materials tests, including weathering & environmental testing, chemical testing, physical & mechanical testing, metals testing and VOC testing.

With expertise in both Shanghai & Guangzhou, the materials lab now can meet the needs of major automotive OEMs in China, multinational Tier 1 suppliers and Chinese manufacturers. For more information, contact autoinfo.sh@intertek.com.

Intertek Exhibiting at Plastics in Automotive Engineering Conference

Intertek will exhibit at the Plastics in Automotive

Materials for car bodies need to meet many requirements. Most parts are produced by using injection molding; during this process problems can surface and its important to have information on the characteristic values of the material. Evaluation of the material can be handled by our experts. Some examples of material characteristics evaluation:

- Processing characteristics of the materials by intrinsic viscosity, melt flow index, capillary rheometry, parallel plate torque rheometry, dilute solution viscosity.
- Mechanical properties as stiffness, toughness, impact, E-modulus and hardness.
- Dimensional stability as thermal expansion, shrinkage, moisture absorption and warping.
- Gloss and color improvement and in addition to this coating adhesion and paint ability, are surface issues these can be tested with eg. scratch- and ultraviolet-resistance or high pressure water jetting
- Black spots or fish eyes could be identified with optical and processing techniques. Analytical techniques could be used to identify the main problem.
- VOC Emmisions to automotive standards.
- Analytical techniques to check the presence and quantities of additives and stabilizers or a combination of them.

To discuss our capabilities or a specific problem, please email cbe.pclenquiries@intertek.com, call +31 46 47 62713, or click [here](#).

Auto Vehicle Test Fit and Dimensioning/Packaging Capabilities



Intertek Grand Rapids' Vehicle Test Fit (VTF) area employs 4 full time ASE certified technicians who perform fits on vehicle components ranging from hoods and fenders to lamps and decorative appliques. Intertek has also performed

fit analyses on oil filters, air filters, radiator supports, and other vehicle components to aid in the assessment of fit, finish and overall quality of car parts. Equipment includes a portable Coordinate Measuring Machine (CMM) with tolerances in the range of 0.25 mm or less which can be used for dimensioning features on vehicles, checking 3-D locations and features on parts, and providing data to be used in fixture design and fabrication. Interteks CAD department can easily integrate the output data from the CMM to develop complex fixtures to hold test samples.

Intertek GR also has a full service Packaging area which allows us to ship samples that have been tested safely back to our clients. We design and build custom packaging to fit the specific dimensions of the part and also employ the use expandable packing foam to secure the samples in the packaging. For more information, please contact gr.services@intertek.com.

Engineering Conference, which focuses on polymers and plastics used in the automotive industry. The Conference will be held at the Congress Center Rosengarten, Mannheim Germany on March 25-26, 2009. Intertek representatives will be at Stand #87 to discuss testing solutions for your company. To schedule a meeting, contact cbe.pclenquiries@intertek.com or call +49 (0)711 27311 514.

Attend New Webinar in February

The Most Powerful Lineup in Performance Testing

February 24-10am & 2pm EST

Knock out warranty and improve overall product quality with Performance Testing. Learn Intertek's four steps to making your products better, including how we've helped companies achieve **ZERO** warranty.

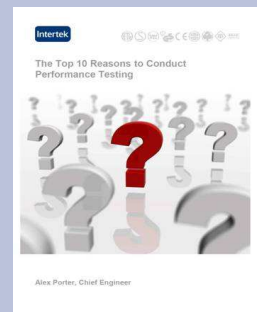
Click [here](#) or call 800-WORLTLAB (967-5352) to register for this **free** webinar and learn how Performance Testing can help you save money, reduce warranty and improve product quality.

Automotive Plastics - Failure Prevention & Material Selection by Chemical Compatibility Studies

Plastics play a vital role in automotive applications and are often exposed to automotive fluids. Information on plastics compatibility is essential in failure prevention and material selection. Intertek Plastics Technology Laboratories (Pittsfield, MA) has extensive experience in material evaluation and performs a variety of test methods used today in determining compatibility. Some common methods include ASTM D543, GM 9308P, ISO 22088, ASTM D471 and ASTM D1693 for ESCR. Typical chemicals evaluated include fuel blends, transmission fluids, antifreeze and cleaning agents. Programs are designed for topical or immersion applications. Property retention data is determined by weight/volume change, color shift or mechanical property evaluations. To discuss your program, contact Intertek PTL at iptl@intertek.com.

To learn more, visit <http://www.ptli.com/antec4.asp> for the white paper: **Predicting the Effects of Contact Materials and Their Environments on Thermoplastics Through Chemical Compatibility Testing.**

New Performance Testing Whitepaper



Learn how Performance Testing can give you a competitive edge! From design evaluation to prototype testing & validation to final product benchmark testing, performance testing gives you the information you need to improve your products.

[Download](#) our free whitepaper:

The Top 10 Reasons to Conduct Performance Testing

- Work out product glitches prior to launch
- Determine the optimal warranty period
- Improve product durability and life
- Support marketing claims

About Intertek

Intertek Group plc (FTSE: ITRK) is a leading international provider of quality and safety services to a wide range of global and local industries. Partnership with Intertek brings increased value to customers' products and processes, ultimately supporting their success in the global market place. Intertek has the experience, expertise, resources and global reach to support its customers through their network of over 23,000 people in more than 110 countries around the world. www.intertek.com

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