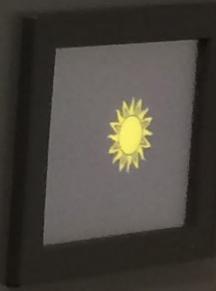


AGING TESTS FOR PLASTICS

ATLAS
Ci4000
Xenon Weather-Ometer





General

Intertek conducts ageing tests on components such as automotive and building materials and consumer products. During their lifetime, plastic materials are exposed to all kinds of external influences such as light, UV, humidity, temperature and chemicals, which can change the properties of these materials over time. Intertek conducts ageing tests to simulate the influence of various environmental parameters on the critical properties of these materials and products.

Intertek can study the heat aging and chemical resistance on materials and products separately or in addition to climatological conditions simulated in a "weathering test".

Aging tests for plastics



Aging Tests

In accelerated ageing tests, we simulate environmental factors that may influence a product during its lifetime. These factors include light, temperature, humidity and chemicals. We can simulate various indoor and outdoor conditions by varying such aspects as light intensity, relative humidity temperature, precipitation cycles and levels of chemical concentrations. The correlation between the real-life use of materials and products will be influenced by many parameters. Like the chosen test standard and conditions, the annual solar irradiation on a location worldwide, the type of material to be tested, the property to be evaluated (before, during and/or after testing), etc.

Intertek has xenon-arc equipment available to perform accelerated weathering tests. The light source is a xenon lamp with filter system to create a spectrum similar to the spectrum of the sun (UV, visible IR).

Due to the wide range of products and variety of applications we have at our disposal, we often need to take a product-specific approach. Intertek will work with you to set up specific tests tailored to individual products and applications. These ageing tests are carried out in accordance with international testing standards, including:

- ASTM, D2565, D4459, G155 and ISO 4892
- Specific to the automotive industry: VDA75202, PV3929, PV3930, SAE J1885, SAE J1960

Product properties

By determining the product's properties before, during and after exposure to environmental conditions, we can calculate what influence these factors have on products and materials. These results can be used, for example, to modify a product's composition in order to optimise its properties. Intertek has an extensive range of modern equipment and expertise available to test and analyse these product properties:

- Optical properties: colour, shine and grey level
- Mechanical properties: tensile strength, bending strength, impact strength, etc.
- Surface analysis: optical microscopy, SEM, TEM, XPS, SIMS



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