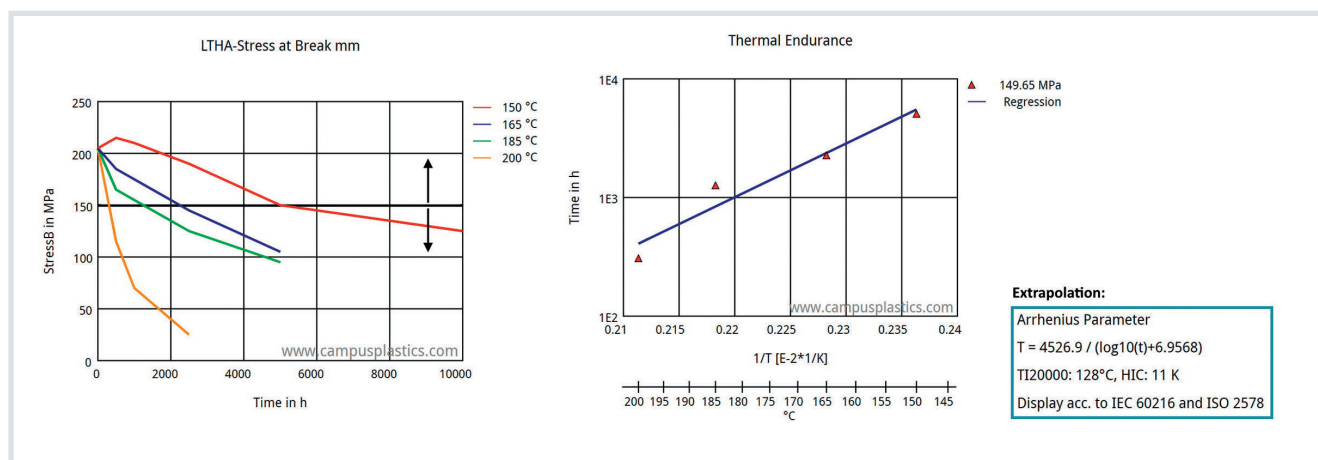


# Heat Aging Data

## Tips and Hints on the Campus Material Database



Display of heat aging (© Campus)

Assessment of heat aging is an important criterion in material selection. In the case of plastics, it must be measured very extensively. Heat aging is usually documented in diagrams, which represent the decrease of significant properties over time after storage at elevated temperatures. This information is also available in Campus. The indicative properties here are

- Charpy impact strength at 23 °C
- Charpy notched impact strength at 23 °C
- Stress at break
- Strain at break
- Puncture – maximum force at 23 °C
- Tensile impact strength
- Electric strength

The term used for these diagrams is “long term heat aging” (LTHA). In the diagram, the user can optionally set either the absolute values measured or the percentage deviation of the indicative property.

### Representing the Arrhenius Plot

Alongside the diagram with the measured values, a so-called Arrhenius plot is displayed in the graphic at the right. Here, the measured values are represented as triangles and the corresponding straight-line Arrhenius plots are shown. The underlying value of the indicative property can be set interactively by entering it in an input field above the diagram.

The Arrhenius plot is also used for extrapolations. The extrapolated value of the temperature index at 20,000 h is shown in accordance with the standard. Not very many LTHA diagrams have been entered in Campus yet. It is therefore recommended that a search for the diagrams first be performed, as described in *Kunststoffe international* 04/2017.



The Campus material database has been a source of comparative material data for industry decision-makers for 30 years.

The [www.campusplastics.com](http://www.campusplastics.com) homepage offers online access to data from all the participating manufacturers. The portal also provides a comprehensive range of features. This series gives background information and focuses on specific useful system functions.