

Damage and material analysis

Plastics

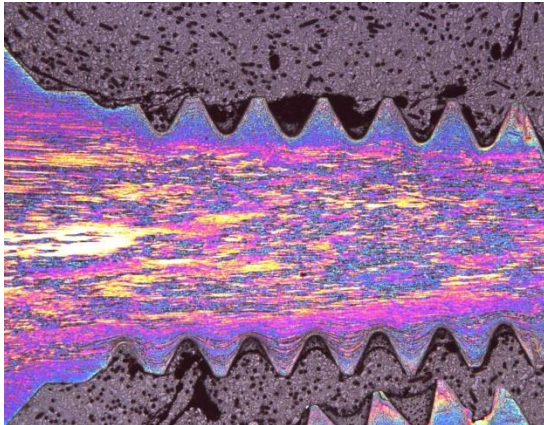
Due to our experience in the field of polymers (material, processing and construction) in combination with our testing facilities, we are able to solve a wide variety of tasks. The range of services offered extends from quality assurance of existing products to the clarification of claims and product-related advice.

Fields of application

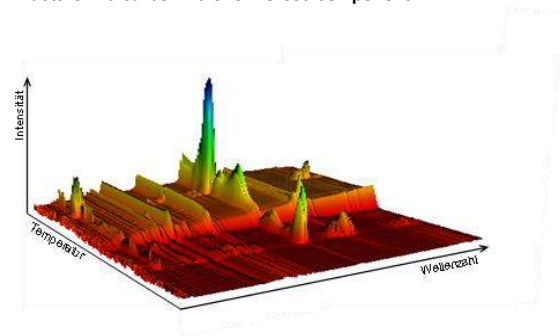
- Polymer Identification
- Composition of polymer blends,
- Compounds and recyclates
- Macro- and microstructure of plastics
- Ageing behaviour of plastics under
- Temperature and chemical exposure
- Qualitative oil analyses
- Loss analysis
- Preparation of expert opinions
- Quality assurance



Fracture in a carbon fibre reinforced component



Colour representation of residual stresses in a plastic screw (thin section in polarized transmitted light)



Presentation of an FTIR analysis

Test methods

- Thermal analysis
- Differential Scanning Calorimetry (DSC): Glass transition, melting behaviour
- Thermogravimetry (TGA): elastomer characterization, moisture, filler content
- Mechanical tests (tensile, compression and bending tests)
- Fourier transformed infrared spectroscopy (FTIR)
- Micro-scale FTIR
- Resistance tests
- Microscopic examinations
- Light microscopy on a ground or thin section (microtomy)
- Scanning Electron Microscopy



Fourier transformed infrared spectroscopy (FTIR)

Specialities

- Damage analysis
- Advice on material selection, processing and design
- Support in product development

Delivery time

The delivery time for plastics testing is 1 day to approx. 2-3 weeks, depending on the problem and the scope. For more demanding examinations, a delivery date will be agreed upon in consultation.

