Damage and material analysis
Plastics

Thanks to our experience in the field of polymers (material, processing and design) combined with our testing capabilities, we are able to solve a wide range of tasks. Our range of services extends from quality assurance of existing products to clarifying cases of damage and product-related consulting.

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 stress
- Qualitative oil analyses
- Damage analysis
- Preparation of expert reports
- Quality assurance
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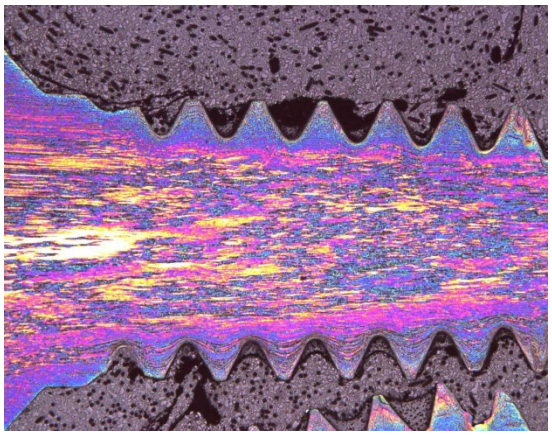
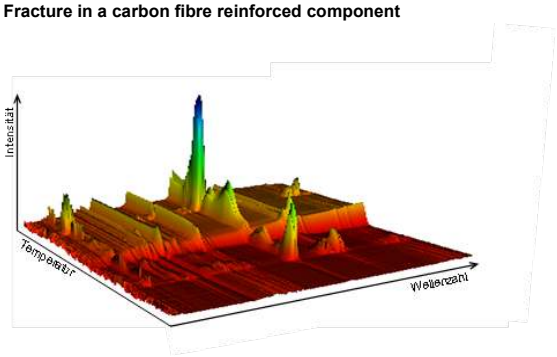


Colour representation of residual stresses in a plastic screw (thin section in polarised transmitted light)

Test methods
- Thermal analysis
- Differential scanning calorimetry (DSC): glass transition, melting behaviour
- Thermogravimetry (TGA): elastomer characterisation, moisture, filler content
- Mechanical tests (tensile, compression and bending tests)
- Fourier-transformed infrared spectroscopy (FTIR)
- Micro-range FTIR
- Resistance tests
- Microscopic examinations
- Light microscopy on microsections or thin sections (microtomy)
- Scanning electron microscopy

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

Fracture in a carbon fibre reinforced component



Visualisation of an FTIR analysis

Fourier-transformed infrared spectroscopy (FTIR)

Delivery time

The delivery time for plastic analyses is 1 day to approx. 2-3 weeks, depending on the issue and scope. For more complex examinations, a delivery date will be agreed delivery date will be agreed.

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