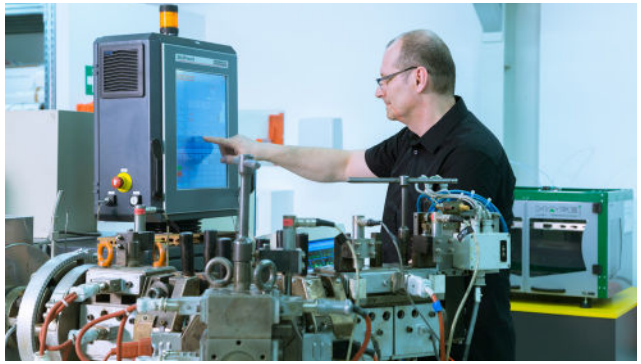
Our competence

Applied research is one of the most important tasks of the Department of Polymer Engineering and Science. The close cooperation with companies enables direct implementation of new scientific findings to industrial practice. Due to our experience in processing, material analysis and tests, and the wide range of testing methods we are able to solve various types of problems.

The services provided range from rheological and thermodynamic material data determination of polymer melts, Wood Polymer Compounds (WPC) and PIM-Feedstocks to exploring of cases of damage and the development of customized polymer blends.

We work closely together with all departments of the Montanuniversität as well with the Polymer Competence Center Leoben (PCCL). Therefore, we can offer our customers the best support for questions in processing, testing and analytical problems.



Services

- Material data for injection moulding- and extrusion simulation
- Rheology
- Characterisation and identification of polymers
- Thermal analysis
- Dynamic mechanical analysis (DMA)
- Failure analysis
- Solving processing problems
- Consultation and training

Contact

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Head of Material Data Determination
Polymer Processing
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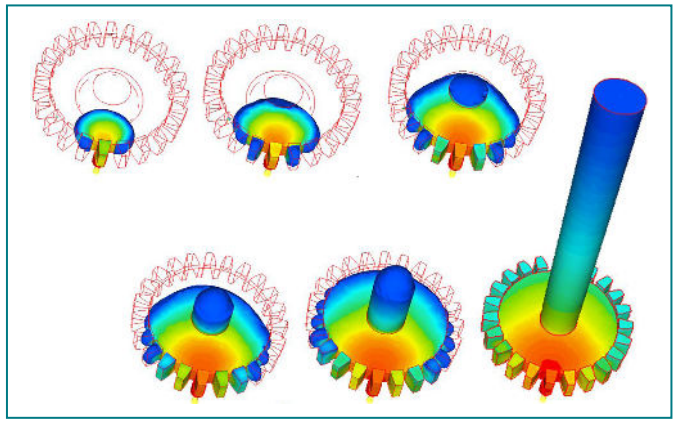
ivica.duretek@unileoben.ac.at
www.kunststofftechnik.at

- Fast order processing
- Comprehensive benefits cataloque
- Modern equipment
- Many years of experience



Contact

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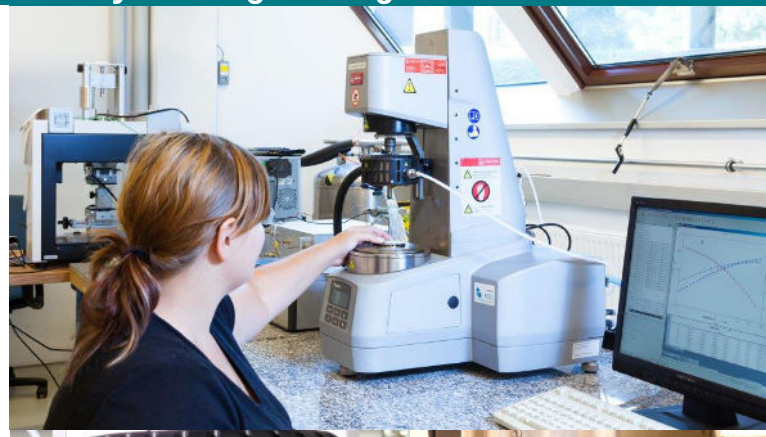
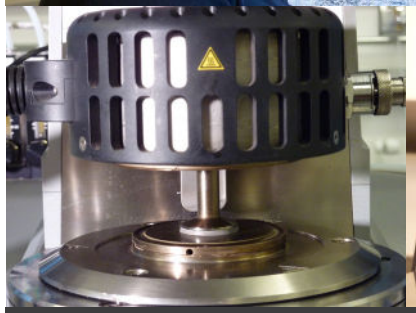
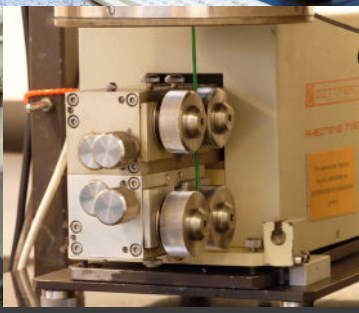
Polymer Engineering and Science Leoben







Material Data Determination

www.kunststofftechnik.at

KUNSTSTOFF TECHNIK LEOBEN

MONTAN UNIVERSITÄT

Our equipment

Equipment

- Rotational rheometer Anton Paar MCR501
- High pressure capillary rheometer Göttfert Rheograph 2002
- Machine rheometers
  - by-pass-extrusion rheometer
  - injection moulding machine rheometer
  - PIM-injection moulding machine rheometer
- Extensional rheometer SER-HV-P01
- Extensional tester Göttfert RHEOTENS 71.97
- Thermal conductivity measuring device K-System II
- Differential scanning calorimeter Mettler Toledo DSC1
- Dilatometer SWO PVT100
- ...

Our services

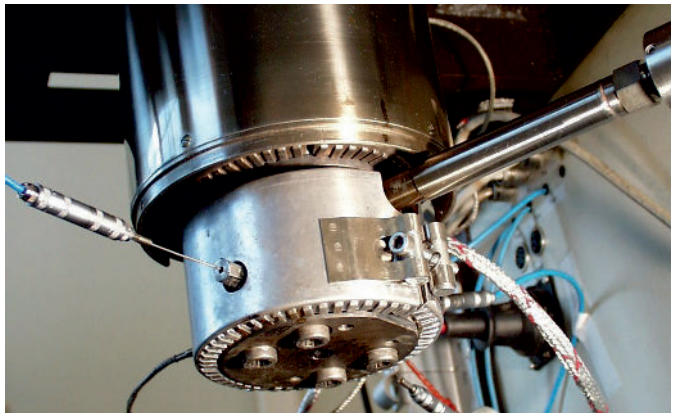
Rheological measurements:

- Viscosity as function of pressure, temperature and shear rate
- Shear viscosity (ISO 11443)
- Complex viscosity (ISO 6721)
- Transient elongational viscosity (ISO 20965)
- Extensional behaviour und melt strength (RHEOTENS)
- Magnetorheology
- Investigation of wall slip in polymer melts
- Measuring flow properties under processing conditions
- Measuring of thermoplastics, elastomers, feedstocks for Powder Injection Moulding (PIM), Wood Plastic Composites (WPC), reactive systems, low viscous substances (food, oils...)

Thermodynamic material data:

- Thermal conductivity as function of pressure and temperature (ASTM D5930-09)
- Specific heat capacity (ISO 11357)
- Specific volume as function of pressure and temperature (ISO 17744)

Complete thermodynamic and rheological material datasets for simulation!



Our services

Dynamic-mechanical thermoanalysis:

- Characterisation of reactive or solid specimens from room until softening temperature

Consulting:

- By selection and implementation of appropriate measurement methods and instruments for control and quality assurance (QA)
- By determination of practice-oriented material data
- Support in cases of damage through failure analysis of moulded parts and semi-finished products