



## COMPLEX PLASTIC RESEARCH

The complex laboratory department provides an opportunity to perform extensive material tests and evaluate measurement results using state-of-the-art equipment for characterising the mechanical and physical properties of plastics. Measurements can be performed according to 600 different standards.

In addition to the mechanical properties, we deal with the emission, lifetime and acoustic parameters of the products. Standard measurements can be performed according to 600 different standards. In addition to the mechanical properties, we deal with the emission, lifetime and acoustic parameters of the products.

Aging tests (high-pressure steam, wet and dry aging) make it possible to determine the life of finished products and the mechanical and material structural changes that occur as a result of aging. For the detection of product emissions, we also deal with standard VOC (volatile organic compound) and FOG (low volatility organic component) measurements. Depending on the needs of the industrial partners, the sound absorption and sound insulation properties of the test samples can also be measured. By interpreting the results, complex overall conclusions can be drawn about the properties of the material structure.

### COMPETENCES

- Komplex Carrying out complex material tests
- Detection of material structure defects and problems
- Defining directions for the development of polyurethane raw materials for profiles
- Evaluation of material test results
- Official reporting



#### SERVICES

- Density test
- Impression test
- Crushing test
- Tensile testing
- Tear strength test
- Dynamic fatigue test
- Autoclave aging
- Dry aging
- Wet aging
- Testing for volatile organic compounds (VOC)
- Acoustic testing



#### TOOLS

- Zwich Roell Z010
- Biobase steam sterilising autoclave
- POL-EKO Aquaterra SLW240 air mixer oven
- Biobase humidity control climate chamber
- GP-VOC 010D VOC chamber
- Acoustic cabin and stand-alone acoustic tube with standard instrumentation



#### REFERENCES

- MOL - development and testing of polyurethane foam
- BorsodChem - development and testing of low-VOC polyurethane foam