



Mechanical Properties Testing of Plastics

TENSILE, COMPRESSION, FLEXURAL, HARDNESS AND IMPACT TESTS

KEY WORDS

THERMOCOMPRESSION,
THERMOPLASTICS,
PROCESSING

DESCRIPTION

The mechanical properties testing service allows for the evaluation of the structural behavior of plastic materials through tensile, compression, flexural, hardness (Shore and Vickers), and impact tests. The laboratory is equipped with digitally controlled load and deformation testing equipment, standardized accessories, and thermal conditioning to ensure reproducible results. The service includes specimen preparation, execution of tests according to applicable standards, and delivery of data along with corresponding analyses for material validation, quality control, or the development of new formulations.

AVAILABLE TECHNIQUES AND/OR EQUIPMENT

- Universal testing machine with load and speed control
- Accessories for tensile, compression and flexural testing according to standard
- Shore A/D and Vickers hardness testers for hardness measurement
- Impact testing equipment (Charpy)
- Thermal and humidity conditioning chamber
- Software for acquiring and analyzing stress-strain curves

APPLICATIONS

- Production of thermoplastic sheets, films or parts
- Optimization of pressing conditions and validation of processability
- Sample preparation for thermal, mechanical or barrier tests
- Processing of recycled or modified formulations

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