

# PU 204: Physical Testing of Polyurethane Foam

## Course Description:

This course provides a thorough grounding in the physical testing of polyurethane foam, equipping participants with the knowledge to select, apply, and interpret test methods with confidence. The course begins by clarifying key testing concepts before moving through a comprehensive survey of test methods for rigid foam, flexible foam, sound and vibration, and thermal analysis. The concluding section addresses how to use and communicate test data effectively, covering result variability, specification writing, and industry standards.

## Introduction

### Testing Jargon

- Temperature/Humidity Effects in Manufacturing and Testing
- Anisotropy in Foam
- Modulus and Poisson's Ratio
- Strain Rate/Temperature Effects

### Individual Test Methods

- Rigid Foam Methods
- Flexible Foam Methods
- Miscellaneous Methods
- Sound/Vibration Methods
- Thermal Analysis Methods

### Conclusion

- Using and Understanding the Data
- Test Result Variability
- Writing Specifications/Data Sheets
- Types of Standards