Australian Standard™

Methods for testing flexible cellular polyurethane

Method 6: Determination of tensile strength and elongation at break

PREFACE

This Standard was prepared by the Standards Australia Committee PL/36, Flexible Polyurethane, to supersede AS 2282.6—1991.

During the preparation of this revision cognizance was taken of ISO 1798:1997, *Flexible cellular polymeric materials—Determination of tensile strength and elongation at break*.

METHOD

1 SCOPE This Standard sets out a method for determining the strength and deformation properties of flexible cellular material when a test piece is extended at a constant rate until it breaks.

2 REFERENCED DOCUMENTS The documents below are referred to in this Standard:

AS
2282 Methods for testing flexible cellular polyurethane
2282.1 Method 1: Sampling and conditioning of test specimens
2282.2 Method 2: Measurement of dimensions of test specimens

3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

3.1 Tensile strength—the maximum force required to break the test piece, divided by its original cross-sectional area.

3.2 Elongation—the change in gauge length of the test piece, determined at the time of break, expressed as a percentage of its original gauge length.

4 PRINCIPLE A test piece of the material is extended at a constant rate until it breaks.

5 APPARATUS A power-driven tensile-testing machine, complying with the following requirements, is required:

(a) The rate of travel of the power-actuated grip shall be 500 ±50 mm/min and shall be uniform at all times.

(b) The sensitivity shall be such that the breaking load of the test piece can be measured with an accuracy of ±1 percent.