Australian Standard™

Methods of testing flexible cellular polyurethane

Method 12: Determination of compression fatigue

PREFACE

This Standard was prepared by the Standards Australia Committee PL/36, Flexible Polyurethane, to supersede AS 2282.12—1991.

The purpose of a fatigue test for cellular polyurethane is to determine the following:

(a) A loss of load-bearing properties, or other characteristics as may be specified.

(b) A loss of thickness.

(c) Structural breakdown, as assessed by visual examination.

METHOD

1 SCOPE This Standard sets out two methods for determining resistance to compression fatigue of flexible cellular polyurethane. Method A is a static compression test and Method B is a dynamic roller compression test.

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

AS
2282 Methods for testing flexible cellular polyurethane
2282.1 Method 1: Sampling and conditioning of test specimens
2282.8 Method 8: Determination of force deflection

3 METHOD A—STATIC COMPRESSION FATIGUE (CONSTANT DEFLECTION) TEST

3.1 Principle A test specimen is compressed between two flat parallel plates in the standard conditions specified in AS 2282.1, for a specified time while under constant deflection, to determine the effect on load-bearing properties.

3.2 Apparatus The apparatus shall consist of two rigid flat parallel plates, larger then the test piece, used with spacer bars to produce a uniform constant deflection of the test specimen.