

Australian Standard™

Methods for testing flexible cellular polyurethane

Method 14: Determination of air flow

PREFACE

This Standard was prepared by the Standards Australia Committee PL/36, Flexible Polyurethane, to supersede AS 2282.14—1991.

During the preparation of this revision cognizance was taken of ISO 7231:1984, *Polymeric materials, cellular flexible—Method of assessment of air flow value at constant pressure drop*.

METHOD

1 SCOPE This Standard sets out a method for the measurement of the ease with which air passes through a cellular structure. Air flow values may be used as an indirect measurement of certain cell structure characteristics.

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

2282.2 Method 2: Measurement of dimensions of test specimens

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

3.1 Air flow value—the volume of air per second, at standard temperature and pressure, required to maintain a constant pressure differential of 125 Pa across a flexible cellular test piece of dimensions approximately 50 mm × 50 mm × 25 mm.

3.2 Air flow parallel to cell rise—air flow value obtained when the air enters and leaves the mounted test piece parallel to the direction of cell rise.

3.3 Air flow perpendicular to cell rise—air flow value obtained when the air enters and leaves the mounted test piece perpendicular to the direction of cell rise.

4 PRINCIPLE A flexible cellular test piece is placed in a cavity over a vacuum chamber and a specified constant air pressure differential is created. The rate of air flow required to maintain this pressure differential is the air flow value.