STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF

AS/NZS 1462.25:2005

Methods of test for plastics pipes and fittings

Method 25: Determination of slow-crack-growth of PE (polyethylene) resins—Notched, constant ligament-stress (NCLS) method

RECONFIRMATION NOTICE

Technical Committee PL-006 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 27 April 2017.

Approved for reconfirmation in New Zealand on behalf of the Standards Council of New Zealand on 10 August 2017.

The following are represented on Technical Committee PL-006:

Association of Accredited Certification Bodies
Australian Building Codes Board
Energy Networks Australia
Engineers Australia
New Zealand Employers and Manufacturers Association (Central)
Plastics Industry Pipe Association of Australia
Plastics New Zealand
Plumbing Products Industry Group
Water New Zealand
Water Services Association of Australia

NOTES

AS/NZS 1462.25:2005
Reconfirmed 2017

Australian/New Zealand Standard™

ASN/ZS 1462.25:2005

Methods of test for plastics pipes and fittings

Method 25: Determination of slow-crack-growth of PE (polyethylene) resins—Notched, constant ligament-stress (NCLS) method

1 SCOPE

This Standard sets out a method to determine the susceptibility of polyethylene resins to slow-crack-growth under a constant ligament-stress in an accelerating environment.

This test method is intended as an index test to assess slow-crack-growth (SCG) resistance for PE compounds. It measures the failure time associated with a given test specimen at a constant, specified, ligament-stress level.

NOTE: This test method does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this test method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2 PRINCIPLE

A dumbbell-shaped, notched test-specimen is subjected to a constant ligament-stress in the presence of a surface-active agent at an elevated temperature.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

ASTM

D5397 Standard Test Method for the Evaluation of Stress Crack Resistance of Polyolefin Geomembranes using Notched Constant Tensile Load

D4703 Standard Practice for Preparation of Compression-Moulded Polyethylene Test Sheets and Test Specimens

E691 Standard Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

4 APPARATUS

The following is required:

(a) *Blanking die* Suitable blanking die for cutting test specimens to the dimensions and tolerances specified in Figure 1 (see Clause 6.1).

(b) *Stress crack testing apparatus* Equipment suitable for subjecting test specimens to a tensile stress of up to 13.8 MPa. The specimens shall be maintained at a constant temperature of 50 ±1°C while being totally immersed in a surface-active agent. The solution should be constantly agitated to provide a uniform concentration throughout the bath.

NOTE: A suitable apparatus is described in ASTM D5397.

(c) *Micrometer* Capable of measuring to ±0.25 mm.