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RECONFIRMATION
OF
AS/NZS 1462.28:2003
Methods of test for plastics pipes and fittings
Method 28: Method for the assessment of the degree of pigment or carbon black
dispersion in polyolefin pipes, fittings and compounds

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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.

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The following are represented on Technical Committee PL-006:

- Association of Accredited Certification Bodies
- Australian Building Codes Board
- Energy Networks Australia
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- New Zealand Employers and Manufacturers Association (Central)
- Plastics Industry Pipe Association of Australia
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Australian/New Zealand Standard™

AS/NZS 1462.28

Methods of test for plastics pipes and fittings**Method 28: Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds**

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee PL-045, Plastics Pipe Systems Test and Calculation Methods.

This Standard is identical to and has been reproduced from ISO 18553, *Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compound*.

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METHOD

1 Scope

This International Standard describes a method with two procedures for the assessment of pigment or carbon black particle and agglomerate size and degree of dispersion in polyolefin pipes, fittings and compounds.

The method is applicable to polyolefin pipes and fittings, as well as raw material in pellet form, with the choice of procedure to be determined by the referring specification.

The method is applicable to carbon black pigmented polyolefin pipes, fittings and compounds with a carbon black content of less than 3 %.

2 Principle

Small samples of raw-material pellet or material removed from the pipe or fitting are heated and compressed between microscope slides. Alternatively, a microtome slice can be taken.

The specimens produced are examined microscopically and the sizes of particles and agglomerates are measured, recorded and graded by comparison with a tabulated grading system (see Table A.1).

A particle/agglomerate size grading is determined from an average of the gradings determined for six specimens. If required, a rating of the appearance of the dispersion is determined by comparison with photomicrographs (see annex B).

3 Apparatus

3.1 General

3.1.1 Microscope, capable of producing suitable magnification, see 4.2 and 5.2, with orthogonal travel, a standard calibrated graticule capable of measuring the particle and agglomerate size, and lighting adequate to avoid optical effects.

3.1.2 Glass microscope slides: 1 mm thickness is suitable, with a thin cover slip.

3.2 For the compression procedure (see 4.1.1)

3.2.1 Oven or hotplate or other type of heating device, capable of operating at a controlled temperature between 150 °C and 210 °C.

3.2.2 Scalpel, for cutting out specimens.

3.2.3 Press, weights or spring clips, to maintain pressure.