
INTERNATIONAL STANDARD



2505

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Unplasticized polyvinyl chloride (PVC) pipes — Determination of longitudinal reversion — Liquid bath immersion method

Tubes en polychlorure de vinyle (PVC) non plastifié — Détermination du retrait à chaud longitudinal — Méthode du bain liquide

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FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2505 was drawn up by Technical Committee ISO/TC 138, *Plastics pipes and fittings for the transport of fluids*, and circulated to the Member Bodies in August 1971.

It has been approved by the Member Bodies of the following countries :

Australia	India	Sweden
Austria	Ireland	Switzerland
Belgium	Israel	Thailand
Chile	Italy	Turkey
Czechoslovakia	Japan	United Kingdom
Denmark	Poland	U.S.A.
Egypt, Arab Rep. of	Portugal	U.S.S.R.
Finland	Romania	
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The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Norway
South Africa, Rep. of

Unplasticized polyvinyl chloride (PVC) pipes – Determination of longitudinal reversion – Liquid bath immersion method

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the longitudinal reversion of unplasticized polyvinyl chloride (PVC) pipes.

2 PRINCIPLE

Immersion of a test portion of pipe of given length in an inert liquid maintained at a temperature of 150°C for a period determined in relation to the wall thickness of the pipe.

Measurement, under the same conditions, of a marked length of this portion of pipe, before and after immersion.

Calculation of the reversion as a percentage of the variation in length in relation to the initial length.

3 APPARATUS

3.1 Heating bath, thermostatically controlled at $150 \pm 2^{\circ}\text{C}$.

The volume of the bath shall be such that there is practically no temperature variation while the test pieces are immersed.

Glycerine, glycol, silicone oil, vaseline oil free of aromatic hydrocarbons, or a solution of calcium chloride, may constitute appropriate heating media, but other liquids may also be used.

It must be ensured in all events that the liquid chosen is stable at the temperatures required, and that it does not affect the product being examined.

Provision shall be made for effective agitation to ensure that the temperature tolerance is maintained throughout the heating medium.

3.2 Device for suspending the test pieces.

3.3 Thermometer, graduated in $0,5^{\circ}\text{C}$.

4 TEST PIECES

4.1 Take as a test piece a length of pipe of 300 ± 20 mm.

4.2 Using, for example, a scribe, trace on this test piece two circumferential marks 100 mm apart, so that one of them is approximately 10 mm from one of the ends.

4.3 Prepare three similar test pieces per pipe.

5 CONDITIONING

Condition the test pieces for at least 2 h at $23 \pm 2^{\circ}\text{C}$.

6 PROCEDURE

6.1 Measure at $23 \pm 2^{\circ}\text{C}$ the distance between the two marks to within 0,25 mm.

6.2 Regulate the temperature of the heating medium at $150 \pm 2^{\circ}\text{C}$.

6.3 Suspend the test pieces vertically in the heating medium by the end farthest from the marks, so that the portion of the test pieces which is immersed is at least 200 mm long.

The test pieces shall be placed so that they touch neither the walls nor the base of the bath.

6.4 Leave the test pieces immersed for

15 min for pipes of up to 8 mm in thickness;

30 min for pipes with thickness of more than 8 mm.