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Unplasticized polyvinyl chloride (PVC) moulded fittings for elastic sealing ring type joints for use under pressure — Pressure-resistance test

Raccords moulés en polychlorure de vinyle (PVC) non plastifié à bagues d'étanchéité pour canalisations avec pression — Essai à la pression hydraulique intérieure

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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 2035 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 June 1970.

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

Australia	Greece	Portugal
Austria	Hungary	South Africa, Rep. of
Czechoslovakia	India	Spain
Denmark	Ireland	Sweden
Egypt, Arab Rep. of	Israel	Switzerland
Finland	Netherlands	Thailand
France	Norway	U.S.S.R.
Germany	Poland	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Belgium
Canada
New Zealand
United Kingdom

Printed in Switzerland

Unplasticized polyvinyl chloride (PVC) moulded fittings for elastic sealing ring type joints for use under pressure — Pressure-resistance test

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of test for verification of the rupture strength under internal hydrostatic pressure of fittings of injection-moulded unplasticized polyvinyl chloride (PVC) with elastic sealing ring type joints for unplasticized polyvinyl chloride (PVC) pressure pipes, with no limitation as to the type and design of fittings and joints used.

It provides specifications for minimal strength requirements of the tested fitting with a specified pressure much higher than the nominal pressure for which the pipes are designed.

It is only applicable to fittings designed for pipes having a nominal diameter less than or equal to 160 mm (6 in).

2 PRINCIPLE

Verification of the tightness of the fitting during the period of the test when a specimen consisting of pipes and fitting assembly having at least one fitting of this type is subjected to a specified internal hydrostatic pressure.

3 SPECIFICATIONS

Testing shall be performed under a pressure equal to $4{,}2\ ^{+\ 0{,}2}_{\ 0}$ times the nominal service pressure of the PVC pipe for which the fitting is designed.

The test temperature shall be 20 ± 2 °C.

The duration of the test shall be not less than 1 h, during which time the fitting under test must be free from leaks. If any other area of the specimen shows a leak (failure of other joint or pipe bursting), the test shall be started again, if necessary using other specimen elements, so that the assembly shows constant tightness during the full duration of the test, i.e. either 1 h if the test proves to be satisfactory, or up to fitting failure, if the joint does not meet this requirement.

4 APPARATUS

4.1 Suitable device, connected to the specimen, capable of applying constant water pressure of $4{,}2\ ^{+\ 0{,}2}_{\ 0}$ times the nominal service pressure of the pipe on the test fitting for not less than 1 h.

4.2 Suitable device to compensate for the longitudinal stresses resulting from the application of internal pressure.

4.3 Pressure gauge, having an accuracy of ± 2 %.

5 TEST SPECIMENS

The specimen shall consist of an assembly of pipe-sections and fittings including at least one fitting of the type to be tested.

The section(s) of pipe to be connected shall have a minimum length of 250 mm.

The assembly of the joints shall be carried out in accordance with the individual national practices or standards.

6 PROCEDURE

Set up the specimen in the apparatus.

If necessary, fill the specimen with water at 20 ± 2 °C.

Wait for 20 min to allow self-adjustment of temperature.

Apply hydrostatic pressure progressively in such a way that the specified pressure is reached after 30 s.

Remove any moisture from the specimen's outside surface.

Maintain pressure for 1 h, checking by means of the pressure gauge that the pressure is within tolerance limits, and ensuring that no leakage occurs at any area of the specimen.

The test is considered satisfactory if no leakage has been observed during the test period.

7 TEST REPORT

The test report shall give the following information :

a) reference to this International Standard;

b) whether the fitting failed or not, and under what conditions;

c) details of variations in procedure not specified in this International Standard, as well as external conditions likely to have affected the results.