
**Plastics pipes and fittings — Peel
decohesion test for polyethylene (PE)
electrofusion assemblies of nominal
outside diameter greater than or equal
to 90 mm**

*Tubes et raccords en matières plastiques — Essai de décohésion
par pelage des assemblages électrosoudables en polyéthylène (PE)
de diamètres extérieurs nominaux supérieurs ou égaux à 90 mm*



Foreword

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International Standard ISO 13954 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*.

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Plastics pipes and fittings — Peel decohesion test for polyethylene (PE) electrofusion assemblies of nominal outside diameter greater than or equal to 90 mm

1 Scope

This International Standard describes a peel test method for determining the decohesive resistance of polyethylene electrofusion socket assemblies for use in the distribution of fluids. This method is applicable to assemblies with nominal outside diameters greater than or equal to 90 mm.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 11413:1996, *Plastics pipes and fittings — Preparation of test piece assemblies between a polyethylene (PE) pipe and an electrofusion fitting*.

3 Principle

The purpose of the test is to assess the cohesion of a PE pipe/electrofusion socket assembly by examination of the decohesion of the assembly by tensile stressing of a strip test piece under conditions which cause progressive peeling of the fused interface. The test is conducted at $23\text{ °C} \pm 2\text{ °C}$.

The decohesive strength of the assembly is characterized by the nature of the failure in the tube wall, the fitting wall or the plane of the fused material and by the percentage decohesion.

4 Apparatus

The apparatus shall include the following main elements (see figure 1):

4.1 Tensile-testing machine, capable of pulling at the specified test speed (see clause 7) with sufficient force to separate the test piece components (see clause 5 and figure 4).

4.2 Shackle-type link, as shown in figure 2.