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**Plastics piping systems — Multilayer  
pipes — Determination of the oxygen  
permeability of the barrier pipe**

*Systèmes de canalisations en plastiques — Tubes multicouches —  
Détermination de la perméabilité à l'oxygène de la couche barrière d'un  
tube*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 17455 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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## Introduction

In response to the worldwide demand for specifications, requirements and test methods for multilayer pipes, WG 16 of ISO/TC 138/SC 5 was created at a meeting held in Kyoto, Japan, in 1998. The working group then started drafting three test standards (including ISO 17455) for multilayer pipes:

- ISO 17456, *Plastics piping systems — Multilayer pipes — Determination of long-term strength*;
- ISO 17454, *Plastics piping systems — Multilayer pipes — Test method for the adhesion of the different layers by using a pulling rig*.

Only multilayer pipes are dealt with in this International Standard and for these purposes cross-linked polyethylene (PE-X) as well as adhesives are to be considered as a thermoplastics material.

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