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**INTERNATIONAL STANDARD**



**3514**

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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**Chlorinated polyvinyl chloride (CPVC) pipes and fittings —  
Specification and determination of density**

*Tubes et raccords en polychlorure de vinyle chloré (PVC-C) — Spécification et détermination  
de la masse volumique*

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**Descriptors :** piping, plastic tubes, chlorinated polyvinyl chloride, pipe fittings, tests, specifications, measurement, density (mass/volume).

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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 3514 was drawn up by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, and circulated to the Member Bodies in June 1974.

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

|                |             |                |
|----------------|-------------|----------------|
| Austria        | Ireland     | Sweden         |
| Belgium        | Israel      | Switzerland    |
| Czechoslovakia | Italy       | Turkey         |
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| Finland        | New Zealand | U.S.A.         |
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| India          | Romania     |                |

No Member Body expressed disapproval of the document.

# Chlorinated polyvinyl chloride (CPVC) pipes and fittings — Specification and determination of density

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the density of chlorinated polyvinyl chloride (CPVC) pipes and fittings and lays down acceptable limits for this density.

## 2 REFERENCE

ISO/R 1183, *Plastics — Methods for determining the density and relative density (specific gravity) of plastics, excluding cellular plastics.*

## 3 SPECIFICATION

The density at 23 °C of a chlorinated polyvinyl chloride (CPVC) pipe or fitting,  $\rho_{23}$ , measured by the method described in clause 5, shall be between the following limits :

$$1,48 \text{ g/cm}^3 \leq \rho_{23} \leq 1,62 \text{ g/cm}^3$$

## 4 TEST PIECES

Cut two test pieces from the pipe or fitting to be tested, of a shape and size conforming to the requirements of the method chosen for the density determination.

## 5 PROCEDURE

Condition the test pieces for at least 1 h at the test temperature.

Measure the density at  $23 \pm 0,1$  °C, using a method which will permit an accuracy of  $\pm 0,002 \text{ g/cm}^3$  to be obtained : preferably one of the methods described in ISO/R 1183.

NOTE — The density determination may be carried out at another temperature, but the result thus obtained should be corrected to the reference temperature of 23 °C.

## 6 EXPRESSION OF RESULTS

Take the arithmetic mean of the two measured values as  $\rho_{23}$  and express it to two decimal places.