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**INTERNATIONAL STANDARD**



**2213**

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

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## **Perchloroethylene for industrial use — Methods of test**

**First edition — 1972-07-15**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 2213:1972

<https://standards.iteh.ai/catalog/standards/sist/58d986cf-6309-4821-8a9c-5b9d51d258e4/iso-2213-1972>

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**UDC 661.723.64 : 620.1**

**Ref. No. : ISO 2213-1972 (E)**

**Descriptors :** halohydrocarbons, tetrachloroethylene, liquids, tests.

Price based on 2 pages

## 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 2213 was drawn up by Technical Committee ISO/TC 47, *Chemistry*.

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It was approved in May 1971 by the Member Bodies of the following countries:

[ISO 2213:1972](#)

Austria	India	Spain
Belgium	Israel	Sweden
Bulgaria	Italy	Switzerland
Egypt, Arab Rep. of	Netherlands	Turkey
France	Portugal	United Kingdom
Germany	Romania	U.S.A.
Hungary	South Africa, Rep. of	U.S.S.R.

The Member Body of the following country expressed disapproval of the document on technical grounds:

New Zealand

# Perchloroethylene for industrial use – Methods of test

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies methods of test for perchloroethylene for industrial use.

## 2 REFERENCES

ISO/R 758, *Method for the determination of density of liquids at 20 °C.*

ISO/R 760, *Determination of water by the Karl Fischer method.*

ISO/R 918, *Test method for distillation (distillation yield and distillation range).*

ISO/R 1393, *Liquid halogenated hydrocarbons for industrial use – Determination of the acidity.*

ISO/R 1394, *Liquid halogenated hydrocarbons for industrial use – Determination of the cloud point.*

ISO 2209, *Liquid halogenated hydrocarbons for industrial use – Sampling.*

ISO 2210, *Liquid halogenated hydrocarbons for industrial use – Determination of residue on evaporation.*

ISO 2211, *Liquid chemical products – Measurement of colour in Hazen units (Platinum-cobalt scale).*<sup>1)</sup>

## 3 SAMPLING

Use the method specified in ISO 2209.

## 4 MEASUREMENT OF COLOUR

Use the method specified in ISO 2211.

## 5 DETERMINATION OF DISTILLATION CHARACTERISTICS

Use the method specified in ISO/R 918.

The following particulars and modifications, specific for perchloroethylene, shall be introduced in the above-mentioned document.

### 5.1 Scope (see section 1 in ISO/R 918)

This determination indicates

a) either the temperatures corresponding to the collection of two volumes of distillate, A and B,

b) or the difference between these two temperatures.

The two volumes A and B shall be indicated in the specifications for the product agreed between the interested parties.

### 5.2 Thermometer (see 3.2 in ISO/R 918)

Use a thermometer conforming to the requirements of ISO/R 918, with a scale from 98 to 152 °C or some other suitable scale.

### 5.3 Distillation rate (see 6.2 in ISO/R 918)

4 to 5 ml/min.

### 5.4 Correction to be applied to the temperatures (see section 7 in ISO/R 918)

This correction is necessary only for case a).

It is equal to  $0.047 (760-p) ^\circ\text{C}$ , where  $p$  is the barometric pressure in millimetres of mercury, and shall be added to the distillation temperatures.

## 6 DETERMINATION OF DENSITY AT 20 °C

Use the method specified in ISO/R 758.

## 7 DETERMINATION OF RESIDUE ON EVAPORATION

Use the method specified in ISO 2210.

## 8 DETERMINATION OF WATER CONTENT

Use the method specified in ISO/R 760.

NOTE – If the water content, determined by this method, appears abnormally high, it may be due to interference by the stabilizing agent. In this case, the procedure to follow shall be agreed between the interested parties.

## 9 DETERMINATION OF THE CLOUD POINT

Use the method specified in ISO/R 1394.

## 10 DETERMINATION OF ACIDITY

Use the method specified in ISO/R 1393.

1) At present at the stage of draft.

**11 TEST REPORT**

The test report shall include, for each test, the following particulars:

- a) the reference of the method used;
- b) the results and the method of expression used;

c) any unusual features noted during the determination;

d) any operation not included in this International Standard or in those ISO documents to which reference is made, or any operation regarded as optional.

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