# INTERNATIONAL STANDARD



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# Perchloroethylene for industrial use — Methods of test

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

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

Austria Belgium Bulgaria India Israel Italy Spain Sweden Switzerland

Egypt, Arab Rep. of France

Netherlands Portugal Turkey United Kingdom

Germany Hungary

Romania South Africa, Rep. of U.S.A. U.S.S.R.

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

New Zealand

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# 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). 1)

#### 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

1) At present at the stage of draft.

- 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) °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.

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### 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.