SWEDISH STANDARDS INSTITUTE

SVENSK STANDARD
SS-EN ISO 1269:2006

Fastställd 2006-11-27

Utgåva 1

Plast – Hartser av homopolymerer och sampolymerer av vinylklorid – Bestämning av flyktiga ämnen (inklusive vatten) (ISO 1269:2006)

Plastics – Homopolymer and copolymer resins of vinyl chloride – Determination of volatile matter (including water) (ISO 1269:2006)

ICS 83.080.20

Språk: engelska

Publicerad: januari 2007

Europastandarden EN ISO 1269:2006 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 1269:2006.

The European Standard EN ISO 1269:2006 has the status of a Swedish Standard. This document contains the official English version of EN ISO 1269:2006.

Upplysningar om **sakinnehållet** i standarden lämnas av SIS, Swedish Standards Institute,
telefon 08 - 555 520 00.

Standarder kan beställas hos SIS Förlag AB som även lämnar **allmänna upplysningar** om svensk och utländsk standard.
Postadress: SIS Förlag AB, 118 80 STOCKHOLM
Telefon: 08 - 555 523 10. *Telefax*: 08 - 555 523 11
E-post: sis.sales@sis.se. *Internet*: www.sis.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 1269

November 2006

ICS 83.080.20

English Version

Plastics - Homopolymer and copolymer resins of vinyl chloride - Determination of volatile matter (including water) (ISO 1269:2006)

Plastiques - Résines d'homopolymères et de copolymères de chlorure de vinyle - Détermination des matières volatiles (y compris l'eau) (ISO 1269:2006)

Kunststoffe - Vinylchlorid-Homo- und Copolymerisate - Bestimmung der flüchtigen Bestandteile (einschließlich Wasser) (ISO 1269:2006)

This European Standard was approved by CEN on 11 November 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN ISO 1269:2006: E

Foreword

This document (EN ISO 1269:2006) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2007, and conflicting national standards shall be withdrawn at the latest by May 2007.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 1269:2006 has been approved by CEN as EN ISO 1269:2006 without any modifications.

Plastics — Homopolymer and copolymer resins of vinyl chloride — Determination of volatile matter (including water)

1 Scope

This International Standard specifies two methods for determining the volatile matter (including water) in homopolymer and copolymer resins of vinyl chloride.

2 Principle

A test portion of resin, spread out in a weighing dish of specified dimensions, is heated at an appropriate temperature to constant mass.

3 Apparatus

3.1 Method A (using an oven and balance)

3.1.1 Oven, capable of being controlled at 110 °C ± 2 °C, with slight natural draught or equipped with a low-speed circulation fan.

3.1.2 Weighing dish, shallow, about 80 mm in diameter and more than 5 mm in height, made of glass, aluminium or, preferably, stainless steel, with a lid.

3.1.3 Balance, capable of weighing to 0,001 g.

3.1.4 Desiccator, containing a suitable desiccant.

3.2 Method B (using an automatic thermobalance)

3.2.1 Oven, capable of being controlled at 110 °C ± 2 °C.

3.2.2 Automatic thermobalance, consisting of a precision balance and an IR or halogen oven. The thermobalance automatically evaporates the volatile matter to constant mass by checking the mass readings.

3.2.3 Weighing dish, about 100 mm in diameter and more than 5 mm in height, made of aluminium.

3.2.4 Balance, capable of weighing to 0,001 g.

3.2.5 Desiccator, containing a suitable desiccant.

4 Procedure

4.1 Method A

Bring the oven (3.1.1) to 110 °C ± 2 °C. Heat the dish (3.1.2), with its lid, in the oven for about 1 h. Remove and allow to cool in the desiccator (3.1.4) to room temperature. Weigh the dish and lid to the nearest 0,005 g.

Spread about 5 g of the test sample evenly over the bottom of the dish. Replace the lid and weigh to the nearest 0,005 g.

Place the assembly in the oven at 110 °C ± 2 °C. Remove the lid — but leave it in the oven — and continue heating for about 1 h.

Remove the assembly from the oven. Replace the lid on the dish. Allow to cool in the desiccator and weigh to the nearest 0,005 g.

Following the same procedure, heat in the oven for further periods of 30 min until the difference between two successive weighings does not exceed 0,005 g.

NOTE Prolonged heating at 110 °C ± 2 °C may result in the thermal degradation of some resins. In such circumstances, it is recommended that the evaporation procedure be conducted at 105 °C ± 2 °C.

Carry out two determinations on each test sample.

4.2 Method B

Bring the oven (3.2.1) to 110 °C ± 2 °C. Heat the aluminium dish (3.2.3) for about 1 h. Remove and allow to cool in the desiccator (3.2.5) to room temperature.

Place the dish in the automatic thermobalance (3.2.2) and tare it.

Spread 5 g to 15 g, depending on the type of resin, of the test sample evenly over the bottom of the dish and weigh it to the nearest 0,005 g.

Set the thermobalance test temperature to the value appropriate to the resin.

Switch on the thermobalance heating system and heat until the mass loss per second over a period of 2 min is less than 0,02 mg.

NOTE These operating conditions have been selected to minimize the effect of thermal degradation.

Carry out two determinations on each test sample.

5 Expression of results

5.1 Method A

For each determination, calculate the percentage of volatile matter (including water) to two decimal places from the formula:

$$\frac{m_2 - m_3}{m_2 - m_1} \times 100$$

where

m_1 is the mass, in grams, of the empty dish and lid (after heating and cooling);

m_2 is the mass, in grams, of the dish, lid and test portion before heating;

m_3 is the mass, in grams, of the dish, lid and test portion after heating.

If the values of the percentage volatile matter obtained in the two determinations on the test sample differ by less than 0,10 % (absolute), use these values to calculate the mean percentage volatile matter of the test sample, expressing the mean to the nearest 0,01 % (absolute).