

**Colouring materials in plastics -
Determination of colour stability to heat
during processing of colouring
materials in plastics - Part 2:
Determination by injection moulding**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12877-2:2000 sisaldab Euroopa standardi EN 12877-2:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.03.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12877-2:2000 consists of the English text of the European standard EN 12877-2:1999.</p> <p>This document is endorsed on 17.03.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This Part of EN 12877 describes a method for determining the colour stability of colouring materials under defined conditions in plastics by injection moulding. The result of the determination is a relative value, not an absolute one. The method is applicable for testing colouring materials in thermoplastics that are processible by injection moulding.</p>	<p>Scope:</p> <p>This Part of EN 12877 describes a method for determining the colour stability of colouring materials under defined conditions in plastics by injection moulding. The result of the determination is a relative value, not an absolute one. The method is applicable for testing colouring materials in thermoplastics that are processible by injection moulding.</p>
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ICS 83.040.30

Võtmesõnad:

English version

Colouring materials in plastics

**Determination of colour stability to heat during
processing of colouring materials in plastics**

Part 2: Determination by injection moulding

Matières colorantes dans les plastiques – Détermination de la stabilité de la couleur à la chaleur au cours de la mise en œuvre des matières colorantes dans les plastiques – Partie 2: Détermination par moulage-injection

Farbmittel in Kunststoffen – Bestimmung der Beständigkeit der Farbe gegen Hitze beim Verarbeiten von Farbmitteln in Kunststoffen – Teil 2: Bestimmung durch Spritzgießen

This European Standard was approved by CEN on 1999-09-05.

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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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 298 "Pigments and extenders", the secretariat of which is held by DIN.

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 April 2000, and conflicting national standards shall be withdrawn at the latest by April 2000.

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

Introduction

This is one of a number of Parts of EN 12877 dealing with methods for determining the colour stability of colouring materials under the influence of the thermal stress encountered during plastics processing. It should be read in conjunction with EN 12877-1.

1 Scope

This Part of EN 12877 describes a method for determining the colour stability of colouring materials under defined conditions in plastics by injection moulding. The result of the determination is a relative value, not an absolute one.

The method is applicable for testing colouring materials in thermoplastics that are processible by injection moulding.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 12877-1	1999	Colouring materials in plastics - Determination of colour stability to heat during processing of colouring materials in plastics - Part 1: General introduction
EN 20105-A02		Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour (ISO 105 - A02:1993)
ISO 7724-2	1984	Paints and varnishes - Colorimetry - Part 2: Colour measurement
ISO 7724-3		Paints and varnishes - Colorimetry - Part 3: Calculation of colour differences

3 Principle

The colouring material to be tested, where appropriate together with titanium dioxide pigment, is mixed with the uncoloured thermoplastic material (test medium). The mixture is processed, using a suitable dispersing equipment, into a form suitable for injection moulding. The coloured test material obtained is injected into the plate-shaped mould cavity of a screw-injection moulding machine. Commencing at the lowest recommended processing temperature suitable for filling the mould cavity, the test temperature is increased in intervals of 10 °C or 20 °C up to the highest practicable processing temperature, and the dwell time is increased to 5 min.

The colour differences between the moulded plate obtained at the lowest temperature and those prepared at the higher temperatures are determined either colorimetrically or visually. The highest test temperature at which any colour change does not exceed a stipulated degree is taken as a measure of the colour stability of the colouring material under the test conditions (test medium and concentration of the colouring material).

4 Materials

4.1 Test medium

Thermoplastic moulding material, to be agreed between the interested parties.

The coloristic behaviour of the test medium when subjected to heat shall be tested with and without titanium dioxide pigment, using the same procedure. If there are changes, these may be taken into account when expressing test results.