

Filler materials for thermoplastics - Scope, designation, requirements, tests

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12943:2000 sisaldab Euroopa standardi EN 12943:1999 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 12943:2000 consists of the English text of the European standard EN 12943:1999.</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>To join plastic components by warmgas-welding use is frequently made of welding fillers. The serviceability of the finished part depends largely on the suitability of the welding fillers. The present standard states the technical conditions governing the supply of the welding fillers.</p>	<p>Scope:</p> <p>To join plastic components by warmgas-welding use is frequently made of welding fillers. The serviceability of the finished part depends largely on the suitability of the welding fillers. The present standard states the technical conditions governing the supply of the welding fillers.</p>
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ICS 25.160.20

Võtmesõnad:

ICS 25.160.20

English version

Filler materials for thermoplastics

Scope, designation, requirements, tests

Produits d'apport pour thermo-
plastiques – Domaine d'application,
désignation, exigences, essais

Schweißzusätze für thermoplastische
Kunststoffe – Geltungsbereich,
Kennzeichnung, Anforderungen,
Prüfung

This European Standard was approved by CEN on 1999-09-30.

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.

The European Standards exist 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.

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 2000, and conflicting national standards shall be withdrawn at the latest by May 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

Plastic components made from film, sheets, tubes and sections have been joined for several decades by welding with the aid of welding fillers.

This standard contains guidelines for assessing the quality of welding fillers. Optimal quality of the weld depends on the quality of the basic material and the welding fillers as well as on their processing (welding conditions) [1], [2]¹⁾.

Another factor is the weld design, i. e. the position and arrangement of the joint and the welding sequence. The basic material and the welding filler should be adapted to each other for welding. This presupposes the availability of data concerning certain material characteristics and appropriate verification of these data.

1 Scope

Welding fillers are frequently used to join plastic components by hot gaswelding. The service ability of the finished part depends largely on the suitability of the welding fillers [3]¹⁾.

This standard applies to the following thermoplastics:

Term for material	Abbreviated term according to ISO 1043-1	Moulding material specified in
Polyethylene high density	PE-HD	ISO 1872-1
Polypropylene homopolymer	PP-H	EN ISO 1873-1
Polypropylene block-copolymer	PP-B	EN ISO 1873-1
Polypropylene random-copolymer	PP-R	EN ISO 1873-1
Polyvinyl chloride normal impact	PVC-NI (PVC-U)	ISO 1163-1
Polyvinyl chloride raised impact	PVC-RI (PVC-U)	ISO 1163-1
Polyvinyl chloride high impact	PVC-HI (PVC-U)	ISO 1163-1
Polyvinyl chloride chlorinated	PVC-C	—
Polyvinyl chloride plasticized	PVC-P	ISO 2898-1
Polyvinylidene fluoride homopolymer	PVDF-H	—
Ethylene-chlorotrifluoroethylene	ECTFE	—
Polyamide	PA 6	ISO 1874-1
Acrylic glass	PMMA	ISO 8257-1
Polycarbonate	PC	ISO 7391-1
Acrylonitrile butadiene styrene normal impact	ABS-NI	ISO 2580-1
Perfluoralkoxy-copolymer	PFA	—
Tetrafluoroethylene/Hexafluoropropylene	FEP	—

¹⁾ The figures relate to references given in annex A.1.

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 standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- ISO 1043-1
Plastics – Symbols and abbreviated terms – Part 1: Basic polymers and their special characteristics
- ISO 1163-1
Plastics – Unplasticized poly (vinyl chloride) (PVC-U) moulding and extrusion materials – Part 1: Designation system and basis for specifications
- ISO 1872-1
Plastics – Polyethylene (PE) moulding and extrusion materials – Part 1: Designation system and basis for specifications
- ISO 1874-1
Plastics – Polyamide (PA) moulding and extrusion materials – Part 1: Designation
- ISO 2580-1
Plastics – Acrylonitrile/butadiene/styrene (ABS) moulding and extrusion materials – Part 1: Designation system and basis for specifications
- ISO 2898-1
Plastics – Plasticized poly (vinyl chloride) (PVC-P) moulding and extrusion materials – Part 1: Designation system and basis for specifications
- ISO 7391-1
Plastics – Polycarbonate (PC) moulding and extrusion materials – Part 1: Designation system and basis for specifications
- ISO 8257-1
Plastics – Poly (methyl metacrylate) (PMMA) moulding and extrusion materials – Part 1: Designation system and basis for specifications
- EN 10204
Metallic products – Types of inspection documents
- EN ISO 291
Plastics – Standard atmospheres for conditioning and testing (ISO 291 : 1997)
- EN ISO 1873-1
Plastics – Polypropylene (PP) moulding and extrusion materials – Part 1: Designation system and basis for specifications (ISO 1873-1 : 1995)

3 Designation

The designation is intended to facilitate the choice and application of welding fillers by the processor thus contributing to reliable welding quality.

The designation includes:

- the EN designation of this European Standard: EN 12943;
- the ISO designation of the moulding components used;
- the code for the supply form (table 2);
- year, month of the production term and
- the manufacturer's code.