BS EN ISO 16396-1:2022

BSI Standards Publication

Plastics — Polyamide (PA) moulding and extrusion materials

Part 1: Designation system and basis for specifications

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National foreword

This British Standard is the UK implementation of EN ISO 16396-1:2022. It is identical to ISO 16396-1:2022. It supersedes BS EN ISO 16396-1:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/82, Thermoplastic materials.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Published by BSI Standards Limited 2022

ISBN 978 0 539 15779 6

ICS 83.080.20

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2022.

Amendments/corrigenda issued since publication

Date	Text affected

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 16396-1

October 2022

ICS 83.080.20

Supersedes EN ISO 16396-1:2015

English Version

Plastics - Polyamide (PA) moulding and extrusion materials - Part 1: Designation system and basis for specifications (ISO 16396-1:2022)

Plastiques - Matériaux à base de polyamide (PA) pour moulage et extrusion - Partie 1: Système de désignation et base de spécifications (ISO 16396-1:2022)

Kunststoffe - Polyamid (PA)-Formmassen für das Spritzgießen und die Extrusion - Teil 1: Bezeichnungssystem und Basis für Spezifikationen (ISO 16396 1:2022)

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European foreword

This document (EN ISO 16396-1:2022) 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 NBN.

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of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 16396-1:2015.

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The text of ISO 16396-1:2022 has been approved by CEN as EN ISO 16396-1:2022 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 16396-1:2015), which has been technically revised.

The main changes compared to the previous edition are as follows:

— “marking of products” has been deleted in the subtitle; the subtitle has been replaced by “Part 1: Designation system and basis for specifications”;

— the abbreviation for “Injection moulding” has been changed back to “M” in Table 4;

— “Multiple processing modes” has been added in Table 4

— the reference to ISO 1874-2 has been changed to ISO 16396-2.

A list of all parts in the ISO 16396 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

In practice, ISO 1043 and ISO 11469 are, in combination, being "improperly" used as a designation system for, e.g. marking. The aim of this document is to simplify the data block system and to connect more to ISO 1043 and ISO 11469, where the first two blocks are used for generic identification and marking of products.

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Plastics — Polyamide (PA) moulding and extrusion materials —

Part 1: Designation system and basis for specifications

1 Scope

This document establishes a system of designation for polyamide (PA) moulding and extrusion materials, which can be used as the basis for specifications.

The types of polyamide plastics are differentiated from each other by a classification system based on appropriate levels of the designatory properties

a) viscosity number,

b) tensile modulus, and

c) nucleating additive,

and on information about composition, intended application and/or method of processing, important properties, additives, colorants, fillers, and reinforcing materials.

The designation system is applicable to all polyamide homopolymers, copolymers, and blends.

It is applicable to unmodified materials ready for normal use and materials modified, for example, by colorants, additives, fillers, reinforcing materials, and polymer modifiers.

This document does not apply to the following materials:

— monomer casting-type polyamides of PA 6;

— monomer casting-type polyamides of PA 12.

It is not intended to imply that materials having the same designation give the same performance. This document does not provide engineering data, performance data, or data on processing conditions which can be required to specify a material. If such additional properties are required, they can be determined according to the test methods specified in ISO 16396-2, if suitable.

In order to specify a thermoplastic material for a particular application, additional requirements can be given in data block 5 (see 4.1).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 307, *Plastics — Polyamides — Determination of viscosity number*

ISO 527 (all parts), *Plastics — Determination of tensile properties*

ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

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