

Plastics - Polyamide (PA) moulding and extrusion materials - Part 1: Designation system and basis for specification (ISO 1874-1:2010)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 1874-1:2010 sisaldab Euroopa standardi EN ISO 1874-1:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.12.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.11.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 1874-1:2010 consists of the English text of the European standard EN ISO 1874-1:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.12.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 15.11.2010.

The standard is available from Estonian standardisation organisation.

ICS 83.080.20

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

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English Version

Plastics - Polyamide (PA) moulding and extrusion materials -
Part 1: Designation system and basis for specification (ISO
1874-1:2010)

Plastiques - Matériaux polyamides (PA) pour moulage et
extrusion - Partie 1: Système de désignation et base de
spécification (ISO 1874-1:2010)

Kunststoffe - Polyamid (PA)-Formmassen für das
Spritzgießen und die Extrusion - Teil 1:
Bezeichnungssystem und Basis für Spezifikationen (ISO
1874-1:2010)

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Foreword

This document (EN ISO 1874-1:2010) 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of an identical text or by endorsement, at the latest by May 2011, and conflicting national standards shall be withdrawn at the latest by May 2011.

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Endorsement notice

The text of ISO 1874-1:2010 has been approved by CEN as a EN ISO 1874-1:2010 without any modification.

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Plastics — Polyamide (PA) moulding and extrusion materials —

Part 1:

Designation system and basis for specification

1 Scope

This part of ISO 1874 establishes a system of designation for polyamide (PA) thermoplastic materials, which may be used as the basis for specifications.

It covers polyamide homopolymers for moulding and extrusion based on PA 6, PA 66, PA 69, PA 610, PA 612, PA 11, PA 12, PA MXD6, PA 46, PA 1212, PA 4T, PA 6T and PA 9T and copolyamides of various compositions for moulding and extrusion.

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

- a) viscosity number,
- b) tensile modulus of elasticity and
- c) presence of nucleating agent,

and on information about chemical structure, intended application, method of processing, important properties, additives, colour, fillers and reinforcing materials.

The designation system is applicable to all polyamide homopolymers and copolymers. It applies to materials ready for normal use, unmodified and modified by colorants, additives, fillers, reinforcing materials, polymer modifiers, etc.

This part of ISO 1874 does not apply to monomer casting-type polyamides of PA 6 and PA 12.

It is not intended to imply that materials having the same designation give necessarily the same performance. This part of ISO 1874 does not provide engineering data, performance data or data on processing conditions which may be required to specify a material for a particular application and/or method of processing. If such additional properties are required, they shall be determined in accordance with the test methods specified in ISO 1874-2, if suitable.

In order to specify a thermoplastic material for a particular application or reproducible processing, additional requirements may be given in data block 5 (see 3.1 and 3.6).

2 Normative references

The following referenced documents are indispensable for the application 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 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*

ISO 1874-2, *Plastics — Polyamide (PA) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*

3 Designation system

3.1 General

The designation system for thermoplastics is based on the following standardized pattern:

Designation						
Description block (optional)	Identity block					
	International Standard number block	Individual-item block				
		Data block 1	Data block 2	Data block 3	Data block 4	Data block 5

The designation consists of an optional description block, reading “Thermoplastics”, and an identity block comprising the International Standard number and an individual-item block. For unambiguous designation, the individual-item block is subdivided into five data blocks comprising the following information:

- Data block 1: Identification of the plastic by its abbreviated term (PA), and information about the chemical structure and composition (see 3.2).
- Data block 2: Position 1: Intended application and/or method of processing (see 3.3).
Positions 2 to 8: Important properties, additives and supplementary information (see 3.3).
- Data block 3: Designatory properties (see 3.4).
- Data block 4: Fillers or reinforcing materials and their nominal content (see 3.5).
- Data block 5: For the purpose of specifications, a fifth data block containing additional information may be added (see 3.6). The kind of information and the code-letters used are not the subject of this part of ISO 1874.

The first character of the individual-item block shall be a hyphen.

The five data blocks shall be separated from each other by a comma.

If a data block is not used, this shall be indicated by doubling the separation sign, i.e. by two commas (,,).

3.2 Data block 1

In this data block, after the hyphen, the polyamide (PA) is identified by using the symbols listed in Tables 1 and 2.

Polyamides containing a plasticizer may be designated by adding the letter P after the symbol, separated from it by a hyphen (e.g. PA 610-P).

Polyamides containing an impact modifier may be designated by adding the letters HI after the symbol, separated from it by a hyphen (e.g. PA 6-HI).