

Irish Standard I.S. EN ISO 1874-2:2012

Plastics - Polyamide (PA) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 1874-2:2012)

© CEN 2012

No copying without NSAI permission except as permitted by copyright law.

Incorporating amendments/corrigenda/National Annexes issued since publication:

# The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i> EN ISO 1874-2:2006					
<i>This document is based o</i> EN ISO 1874-2:2012	<i>n: Published:</i> 10 December, 2012	2			
This document was publi under the authority of the and comes into effect on 10 December, 2012	e NSAI		<u>ICS number:</u> 83.080.20		
<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W <b>NSAI.ie</b>	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie			
Údarás um Chaighdeáin Náisiúnta na hÉireann					

# EUROPEAN STANDARD

# EN ISO 1874-2

# NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2012

ICS 83.080.20

Supersedes EN ISO 1874-2:2006

**English Version** 

## Plastics - Polyamide (PA) moulding and extrusion materials -Part 2: Preparation of test specimens and determination of properties (ISO 1874-2:2012)

Plastiques - Matériaux polyamides (PA) pour moulage et extrusion - Partie 2: Préparation des éprouvettes et détermination des propriétés (ISO 1874-2:2012) Kunststoffe - Polyamid (PA)-Formmassen für das Spritzgießen und die Extrusion - Teil 2: Herstellung von Probekörpern und Bestimmung von Eigenschaften (ISO 1874-2:2012)

This European Standard was approved by CEN on 14 November 2012.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

EN ISO 1874-2:2012 (E)

# Contents

Page

### Foreword

This document (EN ISO 1874-2:2012) 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 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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

This document supersedes EN ISO 1874-2:2006.

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

### Endorsement notice

The text of ISO 1874-2:2012 has been approved by CEN as a EN ISO 1874-2:2012 without any modification.

This page is intentionally left BLANK.

# I.S. EN ISO 1874-2:2012 INTERNATIONAL STANDARD

# ISO 1874-2

Fourth edition 2012-11-15

# Plastics — Polyamide (PA) moulding and extrusion materials —

Part 2: Preparation of test specimens and determination of properties

Plastiques — Matériaux polyamides (PA) pour moulage et extrusion — Partie 2: Préparation des éprouvettes et détermination des propriétés



Reference number ISO 1874-2:2012(E)

ISO 1874-2:2012(E)



## COPYRIGHT PROTECTED DOCUMENT

#### © ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org

Published in Switzerland

Page

## Contents

Forew	ordi	V
1	Scope	1
2	Normative references	1
3 3.1	Preparation of test specimens. Treatment of the material before moulding	2
3.2 3.3	Injection moulding Laser sintering	2 3 3
4 4.1 4.2 4.3	Conditioning of test specimens Conditioning states of the test specimen Dry-as-moulded (DAM) state Moist state	5 5 5
5	Determination of properties	6
Annex	A (normative) Specimen preparation using laser sintering	9

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 1874-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This fourth edition cancels and replaces the third edition (ISO 1874-2:2006), which has been technically revised. It also incorporates the Amendment ISO 1874-2:2006/Amd.1:2010.

ISO 1874 consists of the following parts, under the general title *Plastics* — *Polyamide (PA) moulding and extrusion materials*:

- Part 1: Designation system and basis for specification
- Part 2: Preparation of test specimens and determination of properties

## Plastics — Polyamide (PA) moulding and extrusion materials —

# Part 2: **Preparation of test specimens and determination of properties**

### 1 Scope

This part of ISO 1874 specifies the methods of preparation of test specimens and the test methods to be used in determining the properties of polyamide moulding and extrusion materials. Requirements for handling test material and for conditioning both the test material before moulding and the specimens before testing are given.

Procedures and conditions for the preparation of test specimens and procedures for measuring properties of the materials from which these specimens are made are given. Properties and test methods that are suitable and necessary to characterize polyamide moulding and extrusion materials are listed.

The properties have been selected from the general test methods in ISO 10350-1. Other test methods in wide use for, or of particular significance to, these moulding and extrusion materials are also included in this part of ISO 1874, as are the designatory properties viscosity number and tensile modulus of elasticity given in ISO 1874-1.

### 2 Normative references

The following normative 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 62, Plastics — Determination of water absorption

ISO 75-2, Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite

ISO 179-1, Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test

ISO 179-2, Plastics — Determination of Charpy impact properties —Part 2: Instrumented impact test

ISO 291, Plastics — Standard atmospheres for conditioning and testing

ISO 294-1, Plastics — Injection moulding of test specimens of thermoplastic materials —Part 1: General principles, and moulding of multipurpose and bar test specimens

ISO 294-3, Plastics — Injection moulding of test specimens of thermoplastic materials — Part 3: Small plates

ISO 294-4, Plastics — Injection moulding of test specimens of thermoplastic materials — Part 4: Determination of moulding shrinkage

ISO 307, Plastics — Polyamides — Determination of viscosity number

ISO 472, Plastics — Vocabulary

ISO 527-2, Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics

ISO 1110, Plastics — Polyamides — Accelerated conditioning of test specimens

ISO 1133-2, Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics — Part 2: Method for materials sensitive to time-temperature history and/or moisture



This is a free preview. Purchase the entire publication at the link below:

**Product Page** 

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation