

STN	Tuhé biopalivá Stanovenie obsahu jemných častíc v peletách (ISO 5370: 2023)	STN EN ISO 5370 65 7433
------------	--	---

Solid biofuels - Determination of fines content in pellets (ISO 5370:2023)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/23

Obsahuje: EN ISO 5370:2023, ISO 5370:2023

136710

EUROPEAN STANDARD

EN ISO 5370

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2023

ICS 27.190; 75.160.40

English Version

**Solid biofuels - Determination of fines content in pellets
(ISO 5370:2023)**Biocombustibles solides - Détermination de la teneur
en fines des granulés (ISO 5370:2023)Biogene Festbrennstoffe - Bestimmung des Gehaltes an
Feingut in Pellets (ISO 5370:2023)

This European Standard was approved by CEN on 17 December 2022.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

EN ISO 5370:2023 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 5370:2023) has been prepared by Technical Committee ISO/TC 238 "Solid biofuels" in collaboration with Technical Committee CEN/TC 335 "Solid biofuels" the secretariat of which is held by SIS.

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 August 2023, and conflicting national standards shall be withdrawn at the latest by August 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.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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

Endorsement notice

The text of ISO 5370:2023 has been approved by CEN as EN ISO 5370:2023 without any modification.

INTERNATIONAL STANDARD

ISO 5370

First edition
2023-01

Solid biofuels — Determination of fines content in pellets

*Biocombustibles solides — Détermination de la teneur en fines des
granulés*



Reference number
ISO 5370:2023(E)

© ISO 2023

ISO 5370:2023(E)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Apparatus	2
6 Sample preparation	3
6.1 Sample size reduction.....	3
6.2 Size of the test portion.....	3
7 Procedure	4
7.1 Preparing of the sieving equipment.....	4
7.2 Sieving.....	4
8 Calculations	5
8.1 Proportion of fines.....	5
8.2 Quality control.....	5
9 Performance characteristics	5
10 Test report	5
Annex A (informative) Determination of coarse pellet fines (CPF)	6
Annex B (informative) Determination of fractions of fines smaller than 3,15 mm	11
Annex C (informative) Performance data	13
Annex D (informative) Research study data	15
Bibliography	18

ISO 5370:2023(E)

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 238, *Solid biofuels*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 335, *Solid biofuels*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

Introduction

This document specifies a method for manual determination of the fines content in pellets. The fines content is defined as the percentage in mass of material below 3,15 mm in size (measured with a round hole perforated metal plate sieve according to ISO 3310-2). The fines content is an important parameter since excessive amounts of fines in consignments of pellets can cause problems either in transportation systems or during combustion, or both. It also can cause health problems if the dust is inhaled and it increases the risk of dust explosions. Many of these problems are connected to the tendency of stratification of fines caused by any movement of the pellets.

[Annex A](#) describes a procedure for determining the amount of coarse pellet fines ($3,15 \text{ mm} \leq \text{CPF} < 5,6 \text{ mm}$). The determination of the amounts of smaller fines particles, for example the fractions $< 1 \text{ mm}$ and $< 0,5 \text{ mm}$, is given in [Annex B](#).

NOTE 1 The upper limit of 5,6 mm for CPF was chosen because a sieve with an aperture diameter of 5,6 mm is the standard commercial sieve with the next-smallest aperture diameter after 6 mm, which corresponds to the diameter of the standard pellet size. When conducting the procedure for CPF as outlined in [Annex A](#), additional CPF are created as a result of the sieving procedure. Test results are therefore indicative and best used for comparative purposes rather than treated as CPF originally present in the sample.

NOTE 2 This document will replace ISO 18846.

Solid biofuels — Determination of fines content in pellets

1 Scope

This document specifies a method for determining the amount of material passing through a sieve with 3,15-mm-diameter round holes. It is intended for use in all applications (e.g. laboratories, production sites, field locations) where the measurement of fines is required.

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 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 3310-2, *Test sieves — Technical requirements and testing — Part 2: Test sieves of perforated metal plate*

ISO 16559, *Solid biofuels — Vocabulary*

ISO 18135, *Solid biofuels — Sampling*

ISO 21945, *Solid biofuels — Simplified sampling method for small scale applications*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN