Draft for Public Comment

Form 36

DPC: 25/30466881 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000
Fax: +44 (0)20 8996 7400
www.bsigroup.com

Date: 04 February 2025
Origin: European

Latest date for receipt of comments: 30 March 2025

Project No. 2022/02854

Responsible committee: PRI/72 Rigid cellular materials

Interested committees:

Title: Draft BS EN ISO 844 Rigid cellular plastics — Determination of compressive properties.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

i) has any issues related to 3rd party IPR, patent or copyright
ii) affects other national standard(s)
iii) requires additional national guidance or information

WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 30 March 2025

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop http://shop.bsigroup.com or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email cservices@bsigroup.com. British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from https://standardsdevelopment.bsigroup.com/.

Responsible Committee Secretary: Committee Service Centre (BSI)
Direct tel: 020 8996 7009
E-mail: csc@bsigroup.com

Documents
Document Sharing Hub
Full document details: 25/30466881 DC

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at **https://standardsdevelopment.bsigroup.com/**. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex **(e.g. 3.1)**	Paragraph/ Figure/Table/Note	**Type of comment**	**Commend (justification for change) by the MB**	**Proposed change by the MB**	**Secretariat observations on each comment submitted**
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

Documents
Document Sharing Hub

Full document details: 25/30466881 DC

DRAFT International Standard

ISO/DIS 844

ISO/TC **61**/SC **10**

Secretariat: **SCC**

Voting begins on:
2025-02-04

Voting terminates on:
2025-04-29

Rigid cellular plastics — Determination of compressive properties

Plastiques alvéolaires rigides — Détermination des caractéristiques de compression

ICS: 83.100

This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENTS AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

Reference number
ISO/DIS 844:2025(en)

© ISO 2025

Documents
Document Sharing Hub

Full document details: 25/30466881 DC

COPYRIGHT PROTECTED DOCUMENT

© ISO 2025

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

Documents
Document Sharing Hub
Full document details: 25/30466881 DC

Contents

Page

Foreword ... **iv**
Introduction ... **v**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **1**
4 Symbols ... **3**
5 Principle ... **3**
6 Apparatus ... **3**
6.1 Testing machine ... 3
6.2 Devices for measuring displacement and force ... 4
6.2.1 Displacement ... 4
6.2.2 Force ... 4
6.2.3 Calibration ... 4
6.3 Devices for measuring the dimensions of the test specimens ... 4
7 Test specimens ... **4**
7.1 Dimensions ... 4
7.2 Preparation ... 5
7.3 Number ... 5
7.4 Conditioning ... 5
8 Procedure ... **5**
9 Expression of results ... **6**
9.1 General ... 6
9.2 Compressive strength and compressive strains ... 7
9.2.1 Compressive strength ... 7
9.2.2 Nominal compressive strain (procedure A) ... 7
9.2.3 Compressive strain (procedure B) ... 8
9.3 Compressive stress at 10 % nominal compressive strain (procedure A) ... 8
9.4 Nominal compressive modulus (procedure A) ... 8
9.5 Compressive modulus (procedure B) ... 8
10 Precision ... **8**
10.1 Procedure A ... 8
10.2 Procedure B ... 9
11 Test report ... **10**
Annex A (Informative) **Remarks about the determination of the compressive modulus** ... **11**
Bibliography ... **13**

© ISO 2025 – All rights reserved

Documents
Document Sharing Hub
Full document details: 25/30466881 DC

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 61, *Plastics*, Subcommittee SC 10, *Cellular plastics*, 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 eighth edition cancels and replaces the seventh edition (ISO 844:2021), which has been technically revised. The main changes compared to the previous edition are as follows:

— “Compression” changed to “compressive” throughout the document, including the title.

— The scope changed to include details of Procedure A and Procedure B.

— “Relative deformation” changed “compressive strain.”

— “Nominal relative deformation” changed “nominal compressive strain”.

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.

© ISO 2025 – All rights reserved

Documents
Document Sharing Hub
Full document details: 25/30466881 DC

Introduction

For the determination of compressive stresses, it is common practice to apply an overall deformation to a standard test specimen, especially for quality assurance. However, the test specimen has a complex and inhomogeneous deformation state, under compression, which is not subjected to further analysis in such an evaluation. Measurement results are, therefore not easily transferable to other test specimens or products. This standard describes this procedure as Procedure A, which determines the nominal properties. Procedure B, on the other hand, is used to determine conventional properties, as described below.

Procedure A employs relative plate displacement for the determination of compressive properties. It shall be used to determine:

— compressive strength and the corresponding nominal compressive strain;

— compressive stress at 10 % nominal compressive strain;

— nominal compressive modulus.

Procedure B employs displacement measuring devices directly positioned on the specimen (contact or optical extensometer) or similar devices that measure the specimen displacement. Procedure B shall be used to determine:

— compressive strength and the corresponding compressive strain;

— compressive modulus

© ISO 2025 – All rights reserved

Documents
Document Sharing Hub
Full document details: 25/30466881 DC