

This is a preview of "ISO 815-2:2019". [Click here to purchase the full version from the ANSI store.](#)

Third edition
2019-11

Rubber, vulcanized or thermoplastic — Determination of compression set —

Part 2: At low temperatures

*Caoutchouc vulcanisé ou thermoplastique — Détermination de la
déformation rémanente après compression —*

Partie 2: À basses températures



Reference number
ISO 815-2:2019(E)

© ISO 2019

This is a preview of "ISO 815-2:2019". Click [here](#) to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

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
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

This is a preview of "ISO 815-2:2019". Click here to purchase the full version from the ANSI store.

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
4.1 Method 1.....	2
4.2 Method 2.....	2
5 Apparatus for low temperature tests	2
5.1 Method 1.....	2
5.2 Method 2.....	5
6 Calibration	8
7 Test pieces	8
7.1 Dimensions.....	8
7.2 Preparation.....	9
7.3 Number of test pieces.....	9
7.4 Time interval between production and testing.....	9
7.5 Conditioning.....	9
8 Test conditions	10
8.1 Duration of test.....	10
8.2 Temperature of test.....	10
9 Procedure	10
9.1 Method 1.....	10
9.1.1 Preparation of compression apparatus.....	10
9.1.2 Thickness measurement.....	10
9.1.3 Applying the compression.....	10
9.1.4 Starting the test.....	10
9.1.5 Terminating the test.....	10
9.1.6 Internal examination.....	11
9.2 Method 2.....	11
9.2.1 Preparation of compression apparatus.....	11
9.2.2 Thickness measurement.....	11
9.2.3 Applying the compression.....	11
9.2.4 Starting the test.....	11
9.2.5 Terminating the test.....	11
9.2.6 Measurements.....	11
9.2.7 Internal examination.....	12
10 Expression of results	12
11 Precision	12
12 Test report	12
Annex A (normative) Calibration schedule	14
Annex B (informative) Precision	18
Bibliography	20

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 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

This third edition cancels and replaces the second edition (ISO 815-2:2014), which has been technically revised.

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

- normative references have been updated in [Clause 2](#).
- a precision statement has been added in [Annex B](#).

A list of all parts in the ISO 815 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

This is a preview of "ISO 815-2:2019". [Click here to purchase the full version from the ANSI store.](#)

Introduction

The measurement and recording of the compression set at low temperature is very sensitive to testing conditions, and the values obtained can differ a lot especially for type B test pieces. That is why two measurement methods have been introduced. Method 2 generally gives a higher compression set than method 1, and this difference should be taken into account when preparing material specifications.

Those methods are intended to measure the ability of rubbers of hardness within the range 10 IRHD to 95 IRHD to retain their elastic properties at specified temperatures after prolonged compression at constant strain (normally 25 %) under one of the alternative sets of conditions described. For rubber of nominal hardness 80 IRHD and above, a lower compression strain is used: 15 % for a nominal hardness from 80 IRHD to 89 IRHD, and 10 % for a nominal hardness from 90 IRHD to 95 IRHD.