

This is a preview of "ISO 13942:2019". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2019-05

Bonded abrasive products — Limit deviations and run-out tolerances

Produits abrasifs agglomérés — Écartes limites et tolérances de battement



Reference number
ISO 13942:2019(E)

© ISO 2019

This is a preview of "ISO 13942:2019". [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 13942:2019". Click here to purchase the full version from the ANSI store.

Contents

	Page
Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	1
5 General	2
6 Straight grinding wheels, recessed, relieved and hubbed wheels	2
6.1 Relevant shape types according to ISO 525.....	2
6.2 Straight grinding wheels for general applications.....	7
6.2.1 Limit deviations T_D of the outside diameter, axial run-out tolerance T_{PL} and radial run-out tolerances T_{RL}	7
6.2.2 Limit deviations T_H of the hole diameter.....	7
6.2.3 Limit deviations T_P of the recess diameter and assignment of radii R	8
6.2.4 Limit deviations T_T, T_U of grinding wheel thickness dimensions.....	8
6.2.5 Limit deviations T_E of thickness at bore.....	9
6.3 Straight grinding wheels for other applications not specified in 6.2	9
6.3.1 Examples of application.....	9
6.3.2 Limit deviations T_D of the outside diameter, axial run-out tolerance T_{PL} and radial run-out tolerance T_{RL}	10
6.3.3 Limit deviations T_H of the hole diameter.....	10
6.3.4 Limit deviations T_P of the recess diameters and assignment of radii R	10
6.3.5 Limit deviations T_T of the grinding wheel thickness.....	10
6.3.6 Limit deviations T_E of thickness at bore.....	11
6.4 Grinding wheels for high-pressure grinding.....	11
6.5 Straight grinding wheels used in sets.....	11
6.5.1 General.....	11
6.5.2 Limit deviations T_D of the outside diameter.....	12
6.5.3 Limit deviations T_T of the grinding wheel thickness.....	12
6.6 Cemented or clamped cylinder wheels and disc wheels.....	12
6.6.1 Relevant shape types according to ISO 525.....	12
6.6.2 Limit deviations T_D of the outside diameter, axial run-out tolerance T_{PL} and radial run-out tolerance T_{RL}	13
6.6.3 Limit deviations T_H of the hole diameter.....	14
6.6.4 Limit deviations T_W of the wall thickness.....	14
6.6.5 Limit deviations T_D of the outside diameter of grinding wheel sets.....	14
6.6.6 Limit deviations T_T of the grinding wheel thickness.....	14
7 Dish and cup wheels	15
7.1 Relevant shape types according to ISO 525.....	15
7.2 Dish and cup wheels for general applications.....	16
7.3 Dish and cup wheels for tool and cutter grinding.....	16
8 Grinding and cutting-off wheels	16
8.1 Relevant shape types according to ISO 525.....	16
8.2 Limit deviations T_D of the outside diameter, axial run-out tolerance T_{PL} , and the radial run-out tolerance T_{RL}	18
8.3 Limit deviations T_H of the hole diameter.....	18
8.4 Limit deviations T_T and T_U of the grinding wheel thickness.....	19
9 Segments	19
10 Cones and plugs with threaded insert	21
11 Honing stones and superfinishing stones	24
12 Hand finishing sticks	24

This is a preview of "ISO 13942:2019". [Click here to purchase the full version from the ANSI store.](#)

13	Spindle mounted points and wheels	24
	Bibliography	27

This is a preview of "ISO 13942:2019". [Click here to purchase the full version from the ANSI store.](#)

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 29, *Small tools*, Subcommittee SC 5, *Grinding wheels and abrasives*.

This second edition cancels and replaces the first edition (ISO 13942:2000), which has been technically revised. The main changes compared to the previous edition are as follows:

- Figures added for the following shape types: 2, 3, 4, 13, 16, 17, 17R, 18, 18B, 18P, 18R, 19, 19R, 20, 21, 22, 23, 24, 25, 26, 28, 29, 31A, 31B, 31C, 31D, 31E, 31F, 31G, 35, 36, 37, 39, 40, 52, 54 and 90; geometric tolerancing symbols for simple run-out (T_{PL} and T_{RL}) and the related datum are indicated on the drawings where values for these exist in this document;
- drawings for types 5, 7, 27, 38, 39 and 41 amended to show the geometric tolerancing symbols;
- new symbols for elevation of depressed centre (M), spindle diameter (S_d), spindle length (L_2) of mounted wheels and points, and internal radius of a segment (R_1) added;
- in [Table 18](#), a new row for the outside diameter $D > 1\,800$ mm added giving the corresponding limit deviations and run-out tolerances;
- in [Table 20](#), the limit deviations of grinding wheel thickness for wheels with $T, U \leq 1,6$ mm changed;
- [Clause 5](#) added for general statements and requirements and [Clause 13](#) added for mounted wheels and mounted points;
- normative reference to ISO 603 changed to be informative.

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.