BS ISO 525:2020

BSI Standards Publication

Bonded abrasive products — Shape types, designation and marking

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National foreword

This British Standard is the UK implementation of ISO 525:2020. It supersedes BS ISO 525:2013, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/13, Grinding wheels, abrasive tools, paper and cloths, and powders.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Bonded abrasive products — Shape types, designation and marking

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Foreword

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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).

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This document was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 5, *Grinding wheels and abrasives*.

This fifth edition cancels and replaces the fourth edition (ISO 525:2013), which has been technically revised. The main changes compared to the previous edition are as follows:

— title corrected to be more precise: “Bonded abrasive products – Shape types, designation and marking”;

— scope corrected by deleting bullet point d) for dimensions, limit deviations and tolerances as well as permissible unbalance; requirements for dimensions, limit deviations and tolerances were never specified in ISO 525 but in ISO 13942;

— type of citation of ISO 603, ISO 13942 and ISO 6103 revised to be informative;

— Table 1: symbols revised;

— Table 2: shape types and their designations revised in order to better fit together in terms of language;

— Table 2: addition of new shape types 18B and 18P;

— Table 2: addition of more subtypes to shape types 31, 52, 54 and 90 in accordance with the respective part(s) of ISO 603;

— revision of profiles in 4.2 as well as addition of further profiles;

— former subclauses 5.1, 5.2 and 5.3 deleted;

— former subclause 5.4 revised and moved to be Clause 5;

— revision of Table 3 “Specification” and the following subclauses explaining the elements of Table 3;

— reintroduction of the designation from the edition of 1999 as new Clause 6;

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— revision of Clause 7 “Marking”.

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.

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Bonded abrasive products — Shape types, designation and marking

1 Scope

This document is applicable for bonded abrasive products in general.

NOTE 1 Bonded abrasive products are e.g. grinding wheels, segments, sticks and stones.

This document specifies:

a) ISO type number and shape;

b) dimensional symbols;

c) standard profiles;

d) specification;

e) designation;

f) marking requirements.

NOTE 2 This document is general and is complemented by ISO 603 (all parts) that is applicable for dimensions, by ISO 6103 that is applicable for permissible unbalance and by ISO 13942 that is applicable for limit deviations and tolerances.

This document is not applicable for superabrasive products and coated abrasive products.

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 8486 (all parts), *Bonded abrasives — Determination and designation of grain size distribution*

3 Terms, definitions and symbols

3.1 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.2 Symbols

For symbols see Table 1.

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Table 1 — Symbols

Symbol	Definition
A	Smallest width of a trapezoidal segment
B	Width of a segment, stick or stone
C	Thickness of a segment, stick or stone
D	Outside diameter of abrasive products
E	Thickness at bore of cup, dish, saucer, recessed and relieved grinding wheels and depressed centre grinding and cutting-off wheels
F	Depth of the 1st recess
G	Depth of the 2nd recess
H	Bore diameter of abrasive products
H_t	Thread diameter of grinding wheels and cup, dish, saucer grinding wheels and cones, plugs and balls with threaded insert
J	Smallest diameter of taper cup, dish and saucer grinding wheels, tapered and hubbed grinding wheels and depressed centre grinding and cutting-off wheels
K	Internal diameter of the recess of taper cup, dish and saucer grinding wheels, relieved grinding wheels and depressed centre grinding and cutting-off wheels
L	Length of a segment, stick or stone
L_1	Length of a thread bore of grinding wheels, cones, plugs and balls with threaded insert
L_2	Length of the spindle from the end to entry into the mounted point or wheel
M	Elevation of the depressed centre
N	Depth of the relief
P	Recessed diameter
R	Radius of the recess in the grinding wheel or radius of cylindrical plug with curved or ball end
R_o	Outer radius of a curved segment
R_i	Inner radius of a curved segment
S_d	Diameter of the spindle in a mounted point or wheel
T	Overall thickness
T_1	Length of the cylindrical part of a grinding plug
U	Smallest thickness of tapered and hubbed grinding wheels, dish and saucer grinding wheels and depressed centre grinding and cutting-off wheels
V	Profile angle[a]
W	Rim width of cup, cylinder and dish grinding wheels
X	Thickness of application specific profile[a]
➡	Symbolizes the grinding face of bonded abrasive products.

[a] For wheel profiles, see 4.2.

4 Shape types

4.1 Designation of shape types

Shape type number, shape type name and dimensions shall be in accordance with Table 2.

NOTE It is not compulsory to follow the dimensions given in the International Standards listed in the right column of Table 2 in order to fulfil the requirements of this document.

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