BSI Standards Publication

Safety requirements for superabrasive products

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National foreword

This British Standard is the UK implementation of EN 13236:2019. It supersedes BS EN 13236:2010+A1:2015, which is withdrawn.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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Safety requirements for superabrasive products

Prescriptions de sécurité pour les produits superabrasifs

Sicherheitsanforderungen für Schleifwerkzeuge mit Diamant oder Bornitrid

This European Standard was approved by CEN on 26 November 2018.

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European foreword

This document (EN 13236:2019) has been prepared by Technical Committee CEN/TC 143 “Machine tools — Safety”, the secretariat of which is held by SNV.

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of an identical text or by endorsement, at the latest by October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.

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.

This document supersedes EN 13236:2010+A1:2015.

Significant changes between EN 13236:2010+A1:2015 and EN 13236:2019 are as follows:

a) added the hazard “kickback” in Table 4;

b) added vacuum brazed products in Table 6 for maximum operating speeds;

c) added mobile cutting-off machines in Table 10;

d) revised the definitions and requirements for openings to achieve a better distinction and to avoid different interpretations;

e) merged the tables for bending strength and bending moment for cutting-off wheels for the use on hand-held cutting-off machines into one table and updated the values for minimum requirements for destructive testing.

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

Introduction

This European Standard has been prepared to provide one means of conforming with essential safety requirements, e.g. of the General Product Safety Directive and associated EFTA regulations.

This European Standard is addressed to designers, manufacturers and suppliers of the superabrasive products described in the scope as well as to those who are reconditioning superabrasive cutting-off wheels. In addition, it helps designers, manufacturers and suppliers of grinding machines in the selection of superabrasive products, in order to reduce the risks and achieve conformity of the respective machinery with the essential health and safety requirements of the Machinery Directive.

The extent to which hazards are covered is indicated in the scope of this European Standard.

1 Scope

This document applies to superabrasives products containing natural or synthetic diamond or cBN (cubic boron nitride). It includes precision grinding and cutting-off wheels, non-precision cutting-off wheels, diamond wires, mounted points and other superabrasive products for non-precision grinding. It also applies to reconditioned superabrasive cutting-off wheels.

This document specifies requirements and/or measures for the removal or reduction of hazards resulting from the design and application of the superabrasive products.

This document contains also procedures and tests for verification of the compliance with the requirements as well as safety information for use, which will be made available to the user by the manufacturer.

This document does not apply to bonded abrasive products, coated abrasive products, rotating dressing tools, truers or any non-rotating superabrasive 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.

EN ISO 286-2:2010, *Geometrical product specifications (GPS) - ISO code system for tolerances on linear sizes - Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts (ISO 286-2:2010)*

ISO 22917, *Precision superabrasives — Limit deviations and run-out tolerances for grinding wheels with diamond or cubic boron nitride*

3 Terms, definitions and symbols

For the purposes of this document, the following terms and definitions apply.

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

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

• ISO Online browsing platform: available at http://www.iso.org/obp

3.1 General

3.1.1
superabrasive product
abrasive product containing natural or synthetic diamond or cubic boron nitride in a bond