

Hacksaw blades —

Part 2: Specification for cutting performance

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Engineering Sector Board to Technical Committee MTE/8, upon which the following bodies were represented:

- Association of Engineering Distributors Ltd.
- British Engineers Cutting Tools Association
- British Hacksaw and Bandsaw Manufacturers' Association
- Gauge and Tool Makers' Association
- Ministry of Defence

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Foreword

This Part of BS 1919 has been prepared under the direction of the Engineering Sector Board.

First published in 1953, BS 1919 was revised in 1967, partly to achieve a rationalization of sizes but also as a step towards metrication. The standard was further revised in 1974 to take into account international agreement within ISO on hacksaw blades and to add the flexible type of high speed hacksaw blade.

BS 1919 was further revised in 1983 to include the important bimetal types of hacksaw blade and requirements for both power and hand hacksaw blades.

The present revision of BS 1919 divides the 1983 edition into two Parts.

This Part of BS 1919 has been produced in advance of the related standard ISO 2336 that is being prepared by the International Organization for Standardization (ISO). BS 1919-1 specifies the dimensions of hand and machine hacksaw blades and also includes the static bend test for hand blades only.

This Part of BS 1919 together with Part 1 supersedes BS 1919:1983, which is withdrawn.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 12, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 1919 specifies the performance requirements and methods of test of hand hacksaw and machine hacksaw blades specified in BS 1919-1. Examples of equipment for testing hacksaw blades are given in Annex B.

2 Normative references

This standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this Part of BS 1919 only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

3 Definitions

For the purposes of this British Standard the definitions given in BS 1919-1:1993 apply.

4 Cutting performance

When tested in accordance with Annex A, the wear rate of the hand or machine blade and the total time taken to complete the number of cuts shall not exceed the values given in Table 1 and Table 2 for the type of blade tested.

The blade shall not produce a cut more than 3 mm out of square.

The blade shall not break.

A new blade shall be used for each test.

Table 1 — Test conditions and acceptance limits for hand blade cutting tests

Blade type	Blade dimensions			Speed Strokes/min	No. of cuts	Test bar		Wear rate	Total time
	Thickness mm	Pitch mm	No. of teeth			No. of strips	Thickness of strip mm		
High speed steel: all hard and bimetal	0.63	1.8	14	70	10	10	2.6 ± 0.05	33	92
	0.63	1.4	18	70	10	10	2.6 ± 0.05	37	112
	0.63	1.0	24	70	10	9	2.6 ± 0.05	40	124
	0.63	0.8	32	70	10	8	2.6 ± 0.05	40	132
High speed steel: flexible	0.63	1.8	14	70	8	10	2.6 ± 0.05	73	122
	0.63	1.4	18	70	8	10	2.6 ± 0.05	78	132
	0.63	1.0	24	70	8	9	2.6 ± 0.05	118	146
	0.63	0.8	32	70	8	8	2.6 ± 0.05	120	149
Low alloy steel: flexible	0.63	1.8	14	35	8	5	2.6 ± 0.05	44	134
	0.63	1.4	18	35	8	5	2.6 ± 0.05	40	123
	0.63	1.0	24	35	8	5	2.6 ± 0.05	34	147
	0.63	0.8	32	35	8	4	2.6 ± 0.05	37	127

Table 2 — Test conditions and acceptance limits for power blade cutting tests (high speed steel, all hard and bimetal)

Blade dimensions				Speed Strokes/min	No. of cuts	Test bar		Wear rate	Total time
Length mm	Width mm	Thickness mm	Pitch mm			No. of strips	Thickness of strip mm		
300 and 350	25	1.25	1.8	124	10	15	2.6 ± 0.05	66	66
300 and 350	25	1.25	2.5	124	10	20	2.6 ± 0.05	56	61
350 400 450	32	1.60	2.5	124	10	20	2.6 ± 0.05	65	87
350 400 450	32	1.60	4.0	124	10	25	2.6 ± 0.05	47	60
400 450	40	2.00	4.0	124	10	25	2.6 ± 0.05	81	80
400 450	40	2.00	6.3	124	10	25	2.6 ± 0.05	69	76