

# Specification for nails —

## Part 1: Steel nails

ICS 21.060.50

## Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee B/518, Structural timber, upon which the following bodies were represented:

American Plywood Association (APA)  
 British Woodworking Federation  
 Department of Local Government, Transport and the Regions (Building Research Establishment)  
 Department of Trade and Industry (Engineering Inspectorate)  
 Canada Wood, UK  
 Forestry Commission  
 Institute of Building Control  
 Institution of Structural Engineers  
 National House-Building Council (NHBC)  
 Nordic Timber Council, UK  
 Timber Research and Development Association  
 Timber Trade Federation  
 Trussed Rafter and Fabricators' Association  
 United Kingdom Forest Products Association (UKFPA)

This British Standard, having been prepared under the direction of the Sector Policy and Strategy Committee for Building and Civil Engineering, was published under the authority of the Standards Policy and Strategy Committee on 7 February 2002

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First published as  
BS 1202:1944

First revision as Part 1  
June 1966

Second revision May 1974  
Third edition January 2002

The following BSI references relate to the work on this standard:

Committee reference B/518  
Draft for approval 73/10457

ISBN 0 580 08263 6

### Amendments issued since publication

Amd. No.	Date of issue	Comments

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## Foreword

This British Standard is published in the following separate parts:

- *Part 1: Steel nails;*
- *Part 2: Copper nails;*
- *Part 3: Aluminium nails.*

BS 1202-1:2002 supersedes BS 1202-1:1974, which is withdrawn.

BS 1202-1 is expressed solely in metric units and relates to 16 types of steel nails at present in common use for general purposes.

For the benefit of those not conversant with metric diameters of nails, each table in this standard includes a separate column showing the nearest former standard wire gauge (s.w.g.) numbers. These do not form part of the specification.

Inch equivalents, if required, may be determined from BS 350-1, “*Conversion factors and tables — Basis of tables — Conversion factors*”.

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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.

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## 1 Scope

**1.1** This part of the standard specifies requirements, including dimensions and finish, for the types of steel nails listed in **1.1** and **1.1.2**.

NOTE The nearest former s.w.g. numbers are included in a separate column in each table for convenience only. They do not form part of the specification.

### 1.1.1 Wire nails

- 1) Convex head roofing nails (chisel or diamond points)
- 2) Pipe nails (chisel point)
- 3) Hardboard panel pins (round shank)
- 4) Hardboard panel pins (square shank)
- 5) Lath nails
- 6) Plasterboard nails (jagged shank)
- 7) Tile pegs
- 8) Tram nails with flat or raised head with chisel point
- 9) Square twisted shank flat head nails
- 10) Dowels
- 11) Tenter hooks
- 12) Annular ringed shank flat head nails
- 13) Helical threaded shank flat head nails
- 14) Duplex head nails

### 1.1.2 Cut nails

- 1) Cut clasp nails
- 2) Cut floor brads

**1.2** The types of nail are illustrated in the diagrams accompanying Table 1, Table 2, Table 3, Table 4, Table 5, Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12, Table 13, Table 14, Table 15 and Table 16.

NOTE Requirements for the following nails, which were previously included in this British Standard, are given in BS EN 10230-1.

- 1) Round plain head nails
- 2) Round lost head nails
- 3) Clout or slate nails
- 4) Extra large head clout or felt nails
- 5) Panel pins
- 6) Oval brad head nails
- 7) Oval lost head nails
- 8) Spring head twisted shank nails
- 9) Washer head slab nails

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 6002-1, *Sampling procedures for inspection by variables — Specification for single sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection*.

BS EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods*.

### 3 Materials

**3.1 Wire nails.** Wire nails shall be made of mild steel.

**3.2 Cut nails.** Cut nails shall be made from black rolled steel.

### 4 Workmanship

Nails shall be straight and true in shape.

### 5 Finish

**5.1 Oxidation.** The surface of all nails shall be free from excessive oxidation.

**5.2 Wire nails.** The finish of wire nails shall be one of the following:

- 1) bright;
- 2) galvanized;
- 3) cement-coated (resin-coated);
- 4) an alternative finish such as sherardized, cadmium plated or lead coated, as agreed between purchaser and supplier.

**5.3 Cut nails.** The finish of cut nails shall be one of the following:

- 1) in the "as rolled" condition, except for those sides which are made bright by the cutting process;
- 2) galvanized.

**5.4 Galvanizing.** The coating of galvanized wire nails and galvanized cut nails shall comply with the requirements of BS EN ISO 1461 except that the minimum coat weight shall be 300 g/m<sup>2</sup> at a maximum Acceptable Quality Level (AQL) of 10 % and that the method of sampling shall comply with the requirements of BS 6002-1.

### 6 Dimensions and tolerances

The dimensions of nails shall be in accordance with Table 1, Table 2, Table 3, Table 4, Table 5, Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12, Table 13, Table 14, Table 15 and Table 16, subject to the following tolerances.

1) *Head diameter:*  $\pm 5\%$  (except for extra large head clout or felt nails, which have a minimum diameter of 11 mm).

2) *Shank diameter (dimension D):*

*Round wire nails:* when diameter is less than 2.65 mm,  $\pm 0.03$  mm, when diameter is 2.65 mm and more,  $\pm 0.05$  mm.

*Cut nails:* when not more than 50 mm in length,  $\pm 0.10$  mm; when over 50 mm and not more than 100 mm in length,  $\pm 0.15$  mm; when over 100 mm in length,  $\pm 0.20$  mm.

3) *Length:*

*Wire nails:* when diameter is less than 2.65 mm,  $\pm 0.5$  mm, when diameter is 2.65 mm and more,  $\pm 0.8$  mm.

*Cut nails:* when not more than 50 mm in length,  $\pm 1.0$  mm; when over 50 mm and not more than 100 mm in length,  $\pm 1.5$  mm; when over 100 mm in length,  $\pm 2.0$  mm.

### 7 Inspection

If the purchaser wishes to inspect the nails at the supplier's works, he shall notify the supplier at the time of placing the order.

### 8 Weights

The approximate number of bright nails and cut nails per kilogram is given, for general guidance only, in Table 1, Table 2, Table 3, Table 4, Table 5, Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12, Table 13, Table 14, Table 15 and Table 16.

## 9 Designation for ordering

9.1 When designating steel nails in an enquiry or an order, the following information shall be given:

- 1) quantity required by weight;
- 2) type;
- 3) finish required;
- 4) length in millimetres;
- 5) diameter or dimension  $D$  in millimetres;
- 6) British Standard number.

9.2 Examples:

- 1) 25 kg plasterboard nails (jagged shank), galvanized, 40 mm  $\times$  2.65 mm, to BS 1202-1;
- 2) 50 kg cut steel floor brads, 50 mm  $\times$  2.65 mm, to BS 1202-1.

## 10 Certificate of compliance

If required by the purchaser, the supplier shall certify that the nails comply with the requirements of this standard.

**Table 1 — Dimensions and approximate count of convex head roofing nails  
(chisel or diamond point)**

Length $L$ mm	Shank diameter $D$ mm	Approx. no. of nails per kg	Nearest former s.w.g.
75	5.60	68	5
65	6.00	66	4
65	5.60	79	5

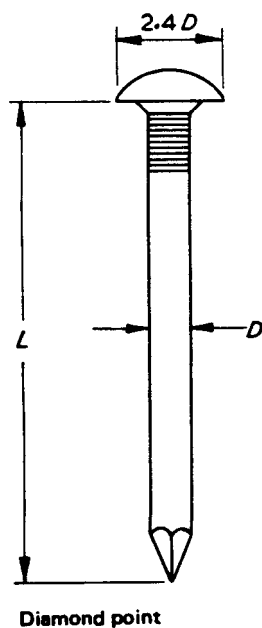
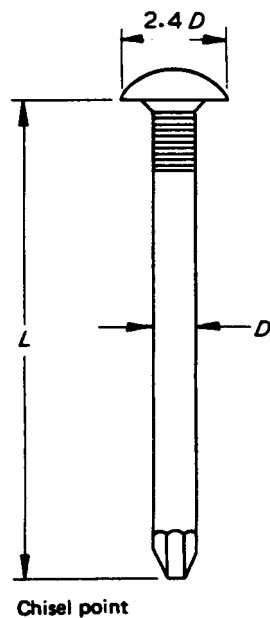




Table 2 — Dimensions and approximate count of pipe nails (chisel point)

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
100	8.00	24	5/16
90	8.00	26	5/16
75	8.00	31	5/16
65	8.00	35	5/16
50	8.00	44	5/16

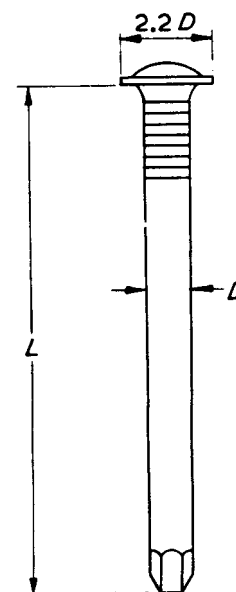


Table 3 — Dimensions and approximate count of hardboard panel pins (round shank)

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
25	1.60	2 340	16
25	1.40	3 090	17
20	1.60	3 140	16
20	1.40	3 970	17

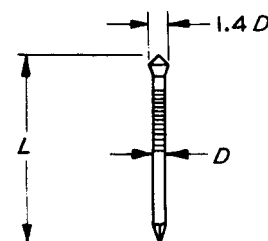


Table 4 — Dimensions and approximate count of hardboard panel pins (square shank)

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
20	1.40	3 470	17

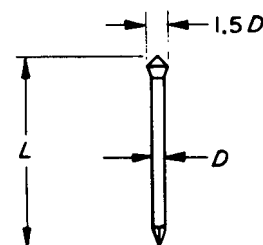


Table 5 — Dimensions and approximate count of lath nails

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
40	2.00	970	14
30	2.00	1 170	14
25	2.00	1 430	14
25	1.80	1 740	15
25	1.60	2 140	16
20	1.80	1 750	15
20	1.60	2 370	16

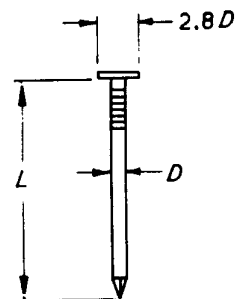


Table 6 — Dimensions and approximate count of plasterboard nails (jagged shank)

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
40		570	12
30	2.65	700	12
	2.65		

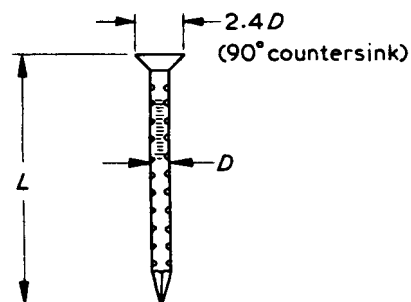
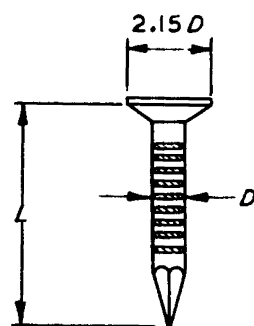


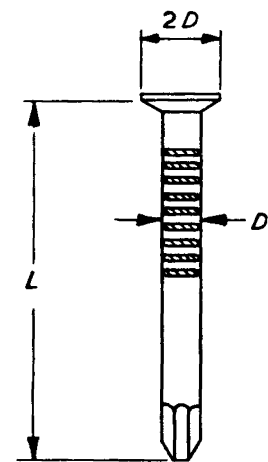
Table 7 — Dimensions and approximate count of tile pegs

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
40		88	4
30	6.00	106	4
	6.00		

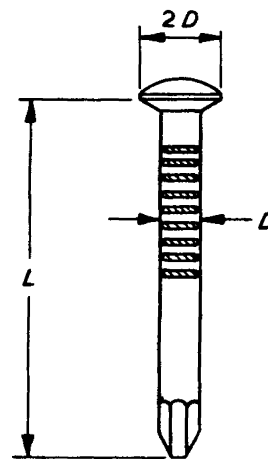


**Table 8 — Dimensions and approximate count of tram nails with flat or raised head and chisel point**

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
65	8.00	37	5/16



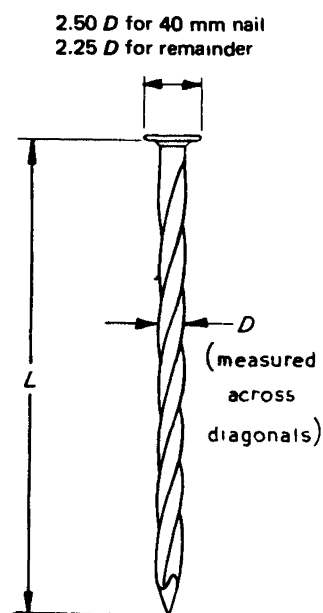
**Flat head**



**Raised head**

Table 9 — Dimensions and approximate count of square twisted shank flat head nails

Length $L$ mm	Shank diameter $D$ mm	Approx. no. of nails per kg	Nearest former s.w.g.
65	3.35	235	10
50	3.00	415	11
50	2.65	515	12
40	2.36	860	13



NOTE Because of the square twisted shank, the shape of the head will differ from that of a round wire nail.

Table 10 — Dimensions and approximate count of dowels

Length $L$ mm	Shank diameter $D$ mm	Approx. no. of nails per kg	Nearest former s.w.g.
50	2.65	455	12
45	2.65	520	12
40	2.65	610	12

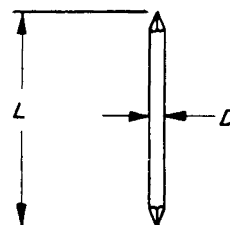


Table 11 — Dimensions and approximate count of tenter hooks

Length $L$ mm	Shank diameter $D$ mm	Approx. no. of nails per kg	Nearest former s.w.g.
25	2.36	690	13
20	2.36	740	13

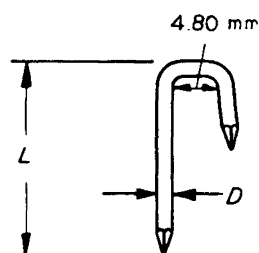


Table 12 — Dimensions and approximate count of annular ringed shank flat head nails

Length <i>L</i> mm	Shank diameter <i>D</i> mm	Approx. no. of nails per kg	Nearest former s.w.g.
200	8.00	13	5/16
180	6.70	22	3
150	6.00	29	4
125	5.60	35	5
115	5.00	57	6
100	5.00	66	6
90	4.00	106	8
90	3.75	123	9
90	3.35	152	10
75	4.00	121	8
75	3.75	154	9
75	3.35	194	10
65	3.75	175	9
65	3.35	230	10
65	3.00	275	11
60	3.35	255	10
60	3.00	310	11
60	2.65	385	12
50	3.35	290	10
50	3.00	340	11
50	2.65	440	12
45	2.65	510	12
45	2.36	640	13
40	2.65	575	12
40	2.36	750	13
30	2.36	840	13
30	2.00	1 170	14
25	2.00	1 430	14
20	2.00	1 900	14

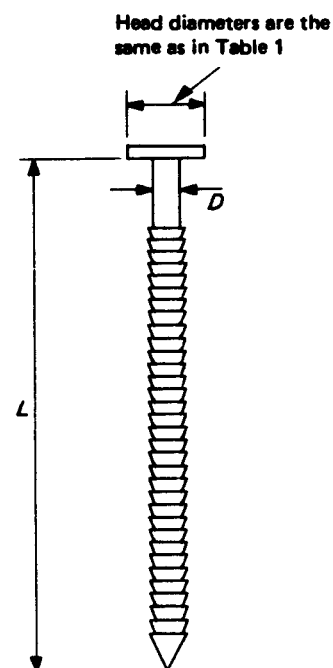


Table 13 — Dimensions and approximate count of helical threaded shank flat head nails

Length $L$ mm	Shank diameter $D$ mm	Approx. no. of nails per kg	Nearest former s.w.g.
200	8.00	13	5/16
180	6.70	22	3
150	6.00	29	4
125	5.60	35	5
115	5.00	57	6
100	5.00	66	6
90	4.00	106	8
90	3.75	123	9
90	3.35	152	10
75	4.00	121	8
75	3.75	154	9
75	3.35	194	10
65	3.75	175	9
65	3.35	230	10
65	3.00	275	11
60	3.35	255	10
60	3.00	310	11
60	2.65	385	12
50	3.35	290	10
50	3.00	340	11
50	2.65	440	12
45	2.65	510	12
40	2.65	575	12

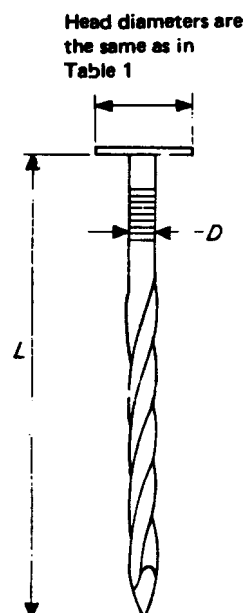


Table 14 — Dimensions and approximate count of duplex head nails

Length $L$ mm	Shank diameter $D$ mm	Lower head diameter	Approx. no. of nails per kg	$d$ mm	Nearest former s.w.g.
100	5.60	11.00	46	9.50	
90	5.00	9.50	62	9.50	5
75	4.00	8.50	100	9.50	6
70	3.75	8.00	130	8.00	8
60	3.35	7.00	200	6.50	9
45	3.00	6.50	345	6.50	10
					11

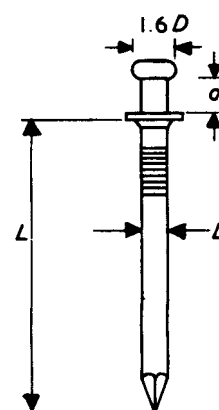
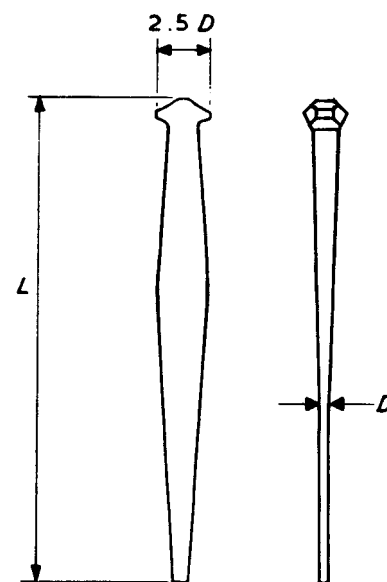


Table 15 — Dimensions and approximate count of cut clasp nails

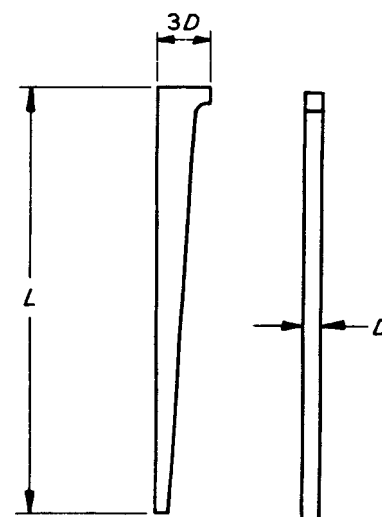
Length $L$ mm	Shank dimension $D$ mm	Approx. no. of nails per kg	Nearest former s.w.g.
200	6.00	11	4
175	5.60	13	5
150	5.60	19	5
125	5.00	30	6
100	4.00	48	8
90	3.75	66	9
75	3.35	103	10
65	3.00	171	11
60	2.65	202	12
50	2.65	286	12
40	2.00	616	14
30	1.80	858	15
25	1.60	1 384	16



Side views

Table 16 — Dimensions and approximate count of cut floor brads

Length $L$ mm	Shank dimension $D$ mm	Approx. no. of nails per kg	Nearest former s.w.g.
75	3.35	100	10
65	3.35	154	10
60	3.00	198	11
50	2.65	264	12
45	2.36	330	13
40	2.36	396	13



Side views

## Bibliography

BS 350-1, *Conversion factors and tables — Basis of tables — Conversion factors.*

BS EN 10230-1, *Steel wire nails — Loose nails for general applications.*





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