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Part I: Carbon, loow alloy steels [MTD 3: Mechanical
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# Indian Standard

# STEEL — CONVERSION OF ELONGATION VALUES

## PART 1 CARBON AND LOW ALLOY STEELS

# ( Second Revision )

## भारतीय मानक

### इस्पात — दीर्घीकरण मानों का रूपान्तरण

### भाग 1 कार्बन और अल्प मिश्रधातु इस्पात

### ( दूसरा पुनरीक्षण )

UDC 669·14 : 620·172·22

**BUREAU OF INDIAN STANDARDS**
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NEW DELHI 110002

# Indian Standard

# STEEL — CONVERSION OF ELONGATION VALUES

## PART 1 CARBON AND LOW ALLOY STEELS

# ( Second Revision )

## NATIONAL FOREWORD

This Indian Standard ( Part 1 ) ( Second Revision ), which is identical with ISO 2566/1 : 1984 'Steel — Conversion of elongation values — Part 1 : Carbon and low alloy steels', issued by the International Organization for Standardization ( ISO ), was adopted by the Bureau of Indian Standards on 24 November 1989 on the recommendations of the Mechanical Testing of Metals Sectional Committee ( MTD 3 ) and approval of the Metallurgical Engineering Division Council.

This standard ( IS 3803 ) was first published in 1961 and subsequently revised in 1974. In this second revision, it has been brought in line with International Standard ISO 2566 and has been issued in two parts identical to the two parts of ISO 2566. This Part 1 covers conversion of elongation values for carbon and low alloy steels, while Part 2 covers conversion of elongation values for austenitic steels.

In the adopted standard certain conversions are not identical with those used in Indian Standards. Attention is specially drawn to the following:

a) Wherever the words 'International Standard' appear, referring to this standard, they should be read as Indian Standard'.

b) Wherever the words 'ISO 2566' appear, referring to this standard, they should be read as 'IS 3803'.

c) Comma ( , ) has been used as a decimal marker while in Indian Standards the current practice is to use point ( . ) as the decimal marker.

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## 0 Introduction

Several different gauge lengths are commonly in use for the determination of percentage elongation of steels in tensile testing. Fixed gauge lengths of 50, 80, 100 and 200 mm are used; proportional gauge lengths of $k \sqrt{S_0}$ are also used for flat and round test pieces, where $k$ may be one of a number of values, i.e. 4; 5,65; 8,16; and 11,3.

The value $5,65 \sqrt{S_0}$ is adopted as the internationally preferred proportional gauge length.

Arising from this choice and the existence of specifications stipulating minimum percentage elongations on different gauge lengths, a growing need has been evident for an International Standard which could be used to convert test results into values based on the different gauge lengths. This part of ISO 2566 accordingly includes tables of conversion factors, tables of actual conversions for some of the most commonly used gauge lengths and elongation values, and figures which may also be used for such conversions. When using these conversions, however, note should be taken of the limitations on their applicability as stated in clause 1.

While, as indicated, the conversions are considered to be reliable within the stated limitations, because of the various factors influencing the determination of percentage elongations, they shall be used for acceptance purposes only by agreement between the customer and supplier.

In cases of dispute, the elongation shall be determined on the gauge length stated in the relevant specification.

## 1 Scope and field of application

This part of ISO 2566 specifies a method of converting room temperature percentage elongations after fracture obtained on various proportional and non-proportional gauge lengths to other gauge lengths.

The formula (see clause 4) on which conversions are based is considered to be reliable when applied to carbon, carbon manganese, molybdenum and chromium molybdenum steels within the tensile strength range 300 to 700 N/mm² and in the hot-rolled, hot-rolled and normalized or annealed conditions, with or without tempering.

These conversions are not applicable to

a) cold reduced steels;

b) quenched and tempered steels;

c) austenitic steels.

Neither should they be used where the gauge length exceeds $25 \sqrt{S_0}$ or where the width to thickness ratio of the test piece exceeds 20.

Care should be exercised in the case of strip under 4 mm thickness, as the index in the formula given in clause 4 increases with decreasing thickness; the value to be used shall be the subject of agreement between the customer and the supplier.

## 2 Symbols

In this part of ISO 2566, the symbols shown in table 1 are used.

**Table 1 — List of symbols**

| Symbol | Description |
|--------|-------------|
| $A$ | Percentage elongation on gauge length, $L_0$, after fracture, obtained on test |
| $A_r$ | Percentage elongation on a different gauge length, required by conversion |
| $d$ | Diameter of test piece |
| $L_0$ | Original gauge length |
| $S_0$ | Original cross-sectional area of test piece |

## 3 Definitions

For the purpose of this part of ISO 2566, the following definitions apply:

**3.1 gauge length**: Any length of the parallel portion of the test piece used for measurement of strain.

The term is hereafter used in this part of ISO 2566 to denote the original gauge length, $L_0$, marked on the test piece for the determination of percentage elongation after fracture, $A$.

3

**3.2 proportional gauge length:** A gauge length having a specified relation to the square root of the cross-sectional area, for example $5,65\sqrt{S_0}$.

**3.3 non-proportional gauge length:** A gauge length not specifically related to the cross-sectional area of the test piece, usually expressed in a given dimension, for example 50 mm.

## 4 Basic formula

The data contained in this part of ISO 2566 are based on the Oliver formula,[1] which is now widely used for such elongation conversions.

The Oliver formula can, in a simplified form, be expressed as

$$A_r = 1,74A\left(\frac{\sqrt{S_0}}{L_0}\right)^{0,4}$$

where

$A_r$ is the required elongation on gauge length $L_0$;

$A$ is the elongation on a gauge length of $4\sqrt{S_0}$;

$S_0$ and $L_0$ are defined in table 1.

This formula gives a direct conversion of elongation on $4\sqrt{S_0}$ to the equivalent for a test piece of cross-sectional area $S_0$, and a gauge length $L_0$. Expressed in terms of $5,65\sqrt{S_0}$, which is now regarded as the internationally accepted standard gauge length, it becomes

$$A_r = 2A\left(\frac{\sqrt{S_0}}{L_0}\right)^{0,4}$$

where $A$ is the elongation on a gauge length of $5,65\sqrt{S_0}$.

Tables 2 to 22 and figures 1 to 5 have been prepared on the basis of the above formulae.

## 5 Conversion from one proportional gauge length to another proportional gauge length

Simple multiplying factors based on the formula are used for such conversions, and the relationships between a number of the more widely used proportional gauge lengths are given in table 2. Detailed conversions of elongations obtained on $4\sqrt{S_0}$ to $5,65\sqrt{S_0}$ are given in table 6.

## 6 Conversion from one non-proportional gauge length to another non-proportional gauge length for test pieces of equal cross-sectional area

The conversion of elongation values of different fixed gauge lengths on test pieces of equal cross-sectional area are also made by simple factors. Conversion factors for gauge lengths of 50, 80, 100 and 200 mm are given in table 3.

## 7 Conversion from a proportional gauge length to a non-proportional gauge length

The conversion factors are variable according to the cross-sectional area of the non-proportional test piece. Table 4 gives the multiplying factors for conversion from elongation on $5,65\sqrt{S_0}$ to the equivalent on fixed gauge lengths of 50, 80, 100 and 200 mm for a range of cross-sectional areas. For conversions in the reverse direction, i.e. elongation on a fixed gauge length to the equivalent of $5,65\sqrt{S_0}$, the reciprocal of the factors is used.

*Examples:*

a) Elongation of 20 % on $5,65\sqrt{S_0}$ is equivalent to $20 \times 1,139 = 22,78$ % on a 25 mm wide test piece of 6 mm thickness with a 50 mm gauge length (see table 4);

b) Elongation of 25 % on a 40 mm × 10 mm test piece of 200 mm gauge length is equivalent to $25 \times 1/0,796 = 31,4$ % on $5,65\sqrt{S_0}$ (see table 4).

From the examples shown it will be seen that conversions involving other proportional gauge lengths can be obtained by prior or subsequent use of the factors shown in table 2.

Tables 7 to 10 can be used to obtain some of these conversions, whilst tables 15 to 18 can be used to obtain elongations on fixed gauge lengths corresponding to $5,65\sqrt{S_0}$.

Similarly, tables 11 to 14 can be used for conversion to $4\sqrt{S_0}$ and tables 19 to 22 for elongations on fixed gauge lengths corresponding to $4\sqrt{S_0}$.

## 8 Conversion from a non-proportional gauge length to another non-proportional gauge length for test pieces of different cross-sectional areas

It is preferable for this calculation to be made in two stages with an initial conversion to $5,65\sqrt{S_0}$.

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1) Oliver, D.A. *Proc. Inst. Mech. Eng.,* **11** 1928: 827.

*Example:*

Elongation of 24 % on 200 mm for a 40 mm × 15 mm test piece in terms of equivalent on a 30 mm × 10 mm test piece with gauge lengths equal to 200, 100 and 50 mm.

$24 \times 1/0{,}863 = 27{,}8$ % on $5{,}65\sqrt{S_0}$ (see table 4).

$27{,}8 \times 0{,}752 = 20{,}9$ % on 30 mm × 10 mm with 200 mm gauge length

$27{,}8 \times 0{,}992 = 27{,}6$ % on 30 mm × 10 mm with 100 mm gauge length

$27{,}8 \times 1{,}309 = 36{,}4$ % on 30 mm × 10 mm with 50 mm gauge length

Elongation on other proportional gauge lengths can be obtained by using the factors given in table 2.

## 9 Use of figures 1 to 5

**9.1** Figures 1 to 5 may be used as an alternative quick method to obtain elongation conversions.

**9.2** Figures 1 to 4 may be used for conversions between $5{,}65\sqrt{S_0}$ and 50 mm, $5{,}65\sqrt{S_0}$ and 200 mm, $4\sqrt{S_0}$ and 50 mm and $4\sqrt{S_0}$ and 200 mm gauge lengths, respectively.

*Example:*

To find the equivalent elongation on $5{,}65\sqrt{S_0}$ and $4\sqrt{S_0}$ to an elongation of 21 % on a 200 mm gauge length of a 25 mm × 12,5 mm test piece of cross-sectional area 312,5 mm².

The intersection of this ordinate with the abscissa representing an elongation of 21 % on a 200 mm gauge length lies on the sloping line representing an elongation of 28 % on $5{,}65\sqrt{S_0}$ on figure 2 and at a position relative to the sloping lines on figure 4 approximating to an elongation of 32,2 on $4\sqrt{S_0}$.

**9.3** Figure 5 may be used for the calculation of all elongation conversions.

The Oliver formula may be rewritten as

$$A_2 = A_1\left(\frac{K_1}{K_2}\right)^{0{,}4}$$

$$= \lambda_{1;2} \times A_1$$

where $K_1$ and $K_2$ designate the proportionality ratios of any two test pieces.

$$K_1 = \frac{L_1}{\sqrt{S_1}}$$

$$K_2 = \frac{L_2}{\sqrt{S_2}}$$

Figure 5 shows the values of $\lambda_{1;2} = (K_1/K_2)^{0{,}4}$.

To use figure 5 it is necessary to perform the following operations:

a) calculate the values of proportionality $K_1 = (L_1/\sqrt{S_1})$ and $K_2 = (L_2/\sqrt{S_2})$ for two test pieces;

b) read graphically the coefficient $\lambda_{1;2} = (K_1/K_2)^{0{,}4}$;

c) the elongation obtained is $A_2 = \lambda_{1;2} \times A_1$.

### Table 2 — Conversion factors: Proportional gauge lengths

| Conversion from: | Factor for conversion to: | | | | | | |
|---|---|---|---|---|---|---|---|
| | $4\sqrt{S_0}$ | $5{,}65\sqrt{S_0}$ | $8{,}16\sqrt{S_0}$ | $11{,}3\sqrt{S_0}$ | $4d$ | $5d$ | $8d$ |
| $4\sqrt{S_0}$ | 1,000 | 0,870 | 0,752 | 0,661 | 0,953 | 0,870 | 0,721 |
| $5{,}65\sqrt{S_0}$ | 1,149 | 1,000 | 0,863 | 0,759 | 1,093 | 1,000 | 0,828 |
| $8{,}16\sqrt{S_0}$ | 1,330 | 1,158 | 1,000 | 0,879 | 1,268 | 1,158 | 0,960 |
| $11{,}3\sqrt{S_0}$ | 1,514 | 1,317 | 1,137 | 1,000 | 1,443 | 1,317 | 1,091 |
| $4d$ | 1,050 | 0,916 | 0,790 | 0,694 | 1,000 | 0,916 | 0,758 |
| $5d$ | 1,149 | 1,000 | 0,863 | 0,759 | 1,093 | 1,000 | 0,828 |
| $8d$ | 1,389 | 1,207 | 1,042 | 0,918 | 1,319 | 1,207 | 1,000 |

### Table 3 — Conversion factors[1]: Non-proportional gauge lengths

| Conversion from: | Factor for conversion to: | | | |
|---|---|---|---|---|
| | 50 mm | 80 mm | 100 mm | 200 mm |
| 50 mm | 1,000 | 0,829 | 0,758 | 0,754 |
| 80 mm | 1,207 | 1,000 | 0,915 | 0,693 |
| 100 mm | 1,320 | 1,093 | 1,000 | 0,758 |
| 200 mm | 1,741 | 1,443 | 1,320 | 1,000 |

1) Provided cross-sectional areas are the same.

**Table 4** — Conversion factors from $5{,}65\sqrt{S_0}$ to non-proportional gauge lengths

Factors shown under "non-proportional gauge lengths" give the value of

$$2\left(\frac{\sqrt{S_0}}{L}\right)^{0{,}4}$$

To convert from values on a gauge length of $5{,}65\sqrt{S_0}$ to a non-proportional gauge length, multiply by the appropriate factor.

To convert from values on a non-proportional gauge length to $5{,}65\sqrt{S_0}$, divide by the appropriate factor.

See also figures 1 and 2.

| Cross-sectional area of test piece | Factor for non-proportional gauge length of: | | | |
|---|---|---|---|---|
| mm² | 200 mm | 100 mm | 80 mm | 50 mm |
| 5 | 0,331 | 0,437 | 0,478 | 0,577 |
| 10 | 0,381 | 0,502 | 0,549 | 0,663 |
| 15 | 0,413 | 0,545 | 0,596 | 0,719 |
| 20 | 0,437 | 0,577 | 0,631 | 0,761 |
| 25 | 0,457 | 0,603 | 0,660 | 0.796 |
| 30 | 0,474 | 0,626 | 0,684 | 0,826 |
| 35 | 0,489 | 0,645 | 0,706 | 0,852 |
| 40 | 0,502 | 0,663 | 0,725 | 0,875 |
| 45 | 0,514 | 0,679 | 0,742 | 0,896 |
| 50 | 0,525 | 0,693 | 0,758 | 0,915 |
| 55 | 0,535 | 0,706 | 0,772 | 0,932 |
| 60 | 0,545 | 0,719 | 0,786 | 0,949 |
| 70 | 0,562 | 0,741 | 0,811 | 0,978 |
| 80 | 0,577 | 0,761 | 0,833 | 1,005 |
| 90 | 0,591 | 0,780 | 0,852 | 1,029 |
| 100 | 0,603 | 0,796 | 0,871 | 1,051 |
| 110 | 0,615 | 0,812 | 0,887 | 1,071 |
| 120 | 0,626 | 0,826 | 0,903 | 1,090 |
| 130 | 0,636 | 0,839 | 0,917 | 1,107 |
| 140 | 0,645 | 0,852 | 0,931 | 1,124 |
| 150 | 0,654 | 0,863 | 0,944 | 1,139 |
| 160 | 0,663 | 0,875 | 0,956 | 1,154 |
| 170 | 0,671 | 0,885 | 0,968 | 1,168 |
| 180 | 0,679 | 0,896 | 0,979 | 1,182 |
| 190 | 0,686 | 0,905 | 0,990 | 1,195 |
| 200 | 0,693 | 0,915 | 1,000 | 1,207 |
| 210 | 0,700 | 0,924 | 1,010 | 1,219 |
| 220 | 0,706 | 0,932 | 1,019 | 1,230 |
| 230 | 0,713 | 0,941 | 1,028 | 1,241 |
| 240 | 0,719 | 0,949 | 1,037 | 1,252 |
| 250 | 0,725 | 0,956 | 1,046 | 1,262 |
| 260 | 0,730 | 0,964 | 1,054 | 1,272 |
| 270 | 0,736 | 0,971 | 1,062 | 1,281 |
| 280 | 0,741 | 0,978 | 1,070 | 1,291 |
| 290 | 0,747 | 0,985 | 1,077 | 1,300 |
| 300 | 0,752 | 0,992 | 1,084 | 1,309 |
| 310 | 0,757 | 0,998 | 1,092 | 1,317 |
| 320 | 0,761 | 1,005 | 1,099 | 1,326 |
| 330 | 0,766 | 1,011 | 1,105 | 1,334 |
| 340 | 0,771 | 1,017 | 1,112 | 1,342 |
| 350 | 0,775 | 1,023 | 1,118 | 1.350 |
| 360 | 0,780 | 1,029 | 1,125 | 1,357 |
| 370 | 0,784 | 1,034 | 1,131 | 1,365 |
| 380 | 0,788 | 1,040 | 1,137 | 1,372 |
| 390 | 0,792 | 1,045 | 1,143 | 1,379 |

**Table 4** *(concluded)* — Conversion factors from $5{,}65\sqrt{S_0}$ to non-proportional gauge lengths

| Cross-sectional area of test piece | Factor for non-proportional gauge length of: | | | |
|---|---|---|---|---|
| mm² | 200 mm | 100 mm | 80 mm | 50 mm |
| 400 | 0,796 | 1,051 | 1,149 | 1,386 |
| 410 | 0,800 | 1,056 | 1,154 | 1,393 |
| 420 | 0,804 | 1,061 | 1,160 | 1,400 |
| 430 | 0,808 | 1,066 | 1,165 | 1,406 |
| 440 | 0,812 | 1,071 | 1,171 | 1,413 |
| 450 | 0,815 | 1,076 | 1,176 | 1,419 |
| 460 | 0,819 | 1,080 | 1,181 | 1,426 |
| 470 | 0,822 | 1,085 | 1,186 | 1,432 |
| 480 | 0,826 | 1,090 | 1,191 | 1,438 |
| 490 | 0,829 | 1,094 | 1,196 | 1,444 |
| 500 | 0,833 | 1,099 | 1,201 | 1,450 |
| 550 | 0,849 | 1,120 | 1,224 | 1,477 |
| 600 | 0,863 | 1,139 | 1,246 | 1,503 |
| 650 | 0,877 | 1,158 | 1,266 | 1,528 |
| 700 | 0,891 | 1,175 | 1,285 | 1,550 |
| 750 | 0,903 | 1,191 | 1,303 | 1,572 |
| 800 | 0,915 | 1,207 | 1,320 | 1,592 |
| 850 | 0,926 | 1,222 | 1,336 | 1,612 |
| 900 | 0,936 | 1,236 | 1,351 | 1,630 |
| 950 | 0,947 | 1,249 | 1,366 | 1,648 |
| 1 000 | 0,956 | 1,262 | 1,380 | 1,665 |
| 1 050 | 0,966 | 1,274 | 1,393 | 1,681 |
| 1 100 | 0,975 | 1,286 | 1,406 | 1,697 |
| 1 150 | 0,983 | 1,298 | 1,419 | 1,712 |
| 1 200 | 0,992 | 1,309 | 1,431 | 1,727 |
| 1 250 | 1,000 | 1,320 | 1,443 | 1,741 |
| 1 300 | 1,008 | 1,330 | 1,454 | 1,755 |
| 1 350 | 1,016 | 1,340 | 1,465 | 1,768 |
| 1 400 | 1,023 | 1,350 | 1,476 | 1,781 |
| 1 450 | 1,030 | 1,359 | 1,486 | 1,794 |
| 1 500 | 1,037 | 1,369 | 1,496 | 1,806 |
| 1 550 | 1,044 | 1,378 | 1,506 | 1,818 |
| 1 600 | 1,051 | 1,386 | 1,516 | 1,829 |
| 1 650 | 1,057 | 1,395 | 1,525 | 1,841 |
| 1 700 | 1,063 | 1,403 | 1,534 | 1,852 |
| 1 750 | 1,070 | 1,411 | 1,543 | 1,862 |
| 1 800 | 1,076 | 1,419 | 1,552 | 1,873 |
| 1 850 | 1,082 | 1,427 | 1,560 | 1,883 |
| 1 900 | 1,087 | 1,435 | 1,569 | 1,893 |
| 1 950 | 1,093 | 1,442 | 1,577 | 1,903 |
| 2 000 | 1,099 | 1,450 | 1,585 | 1,913 |
| 2 050 | 1,104 | 1,457 | 1,593 | 1,922 |
| 2 100 | 1,109 | 1,464 | 1,600 | 1,931 |
| 2 150 | 1,115 | 1,471 | 1,608 | 1,941 |
| 2 200 | 1,120 | 1,477 | 1,615 | 1,950 |
| 2 250 | 1,125 | 1,484 | 1,623 | 1,958 |
| 2 300 | 1,130 | 1,491 | 1,630 | 1,967 |
| 2 350 | 1,135 | 1,497 | 1,637 | 1,975 |
| 2 400 | 1,139 | 1,503 | 1,644 | 1,984 |
| 2 450 | 1,144 | 1,510 | 1,651 | 1,992 |
| 2 500 | 1,149 | 1,516 | 1,657 | 2,000 |
| 2 550 | 1,153 | 1,522 | 1,664 | 2,008 |
| 2 600 | 1,158 | 1,528 | 1,670 | 2,016 |
| 2 650 | 1,162 | 1,533 | 1,677 | 2,023 |
| 2 700 | 1,167 | 1,539 | 1,683 | 2,031 |
| 2 750 | 1,171 | 1,545 | 1,689 | 2,038 |
| 2 800 | 1,175 | 1,550 | 1,695 | 2,046 |
| 2 850 | 1,179 | 1,556 | 1,701 | 2,053 |
| 2 900 | 1,183 | 1,561 | 1,707 | 2,060 |
| 2 950 | 1,187 | 1,567 | 1,713 | 2,067 |
| 3 000 | 1,191 | 1,572 | 1,719 | 2,074 |

## Table 5 — Conversion factors from $4\sqrt{S_0}$ to non-proportional gauge lengths

Factors shown under "non-proportional gauge lengths" give the value of

$$1{,}74\left(\frac{\sqrt{S_0}}{L}\right)^{0,4}$$

To convert from values on a gauge length of $4\sqrt{S_0}$ to a non-proportional gauge length, multiply by the appropriate factor.

To convert from values on a non-proportional gauge length to $4\sqrt{S_0}$, divide by the appropriate factor.

See also figures 3 and 4.

| Cross-sectional area of test piece | Factor for non-proportional gauge length of: | | | |
|---|---|---|---|---|
| mm² | 200 mm | 100 mm | 80 mm | 50 mm |
| 5 | 0,288 | 0,380 | 0,416 | 0,502 |
| 10 | 0,331 | 0,437 | 0,478 | 0,577 |
| 15 | 0,359 | 0,474 | 0,518 | 0,625 |
| 20 | 0,380 | 0,502 | 0,549 | 0,662 |
| 25 | 0,398 | 0,525 | 0,574 | 0,693 |
| 30 | 0,413 | 0,544 | 0,595 | 0,718 |
| 35 | 0,426 | 0,562 | 0,614 | 0,741 |
| 40 | 0,437 | 0,577 | 0,631 | 0,761 |
| 45 | 0,447 | 0,590 | 0,646 | 0,779 |
| 50 | 0,457 | 0,603 | 0,659 | 0,796 |
| 55 | 0,466 | 0,615 | 0,672 | 0,811 |
| 60 | 0,474 | 0,625 | 0,684 | 0,825 |
| 70 | 0,489 | 0,645 | 0,705 | 0,851 |
| 80 | 0,502 | 0,662 | 0,724 | 0,874 |
| 90 | 0,514 | 0,678 | 0,742 | 0,895 |
| 100 | 0,525 | 0,693 | 0,757 | 0,914 |
| 110 | 0,535 | 0,706 | 0,772 | 0,932 |
| 120 | 0,544 | 0,718 | 0,786 | 0,948 |
| 130 | 0,553 | 0,730 | 0,798 | 0,963 |
| 140 | 0,562 | 0,741 | 0,810 | 0,978 |
| 150 | 0,560 | 0,751 | 0,821 | 0,991 |
| 160 | 0,577 | 0,761 | 0,832 | 1,004 |
| 170 | 0,584 | 0,770 | 0,842 | 1,016 |
| 180 | 0,590 | 0,779 | 0,852 | 1,028 |
| 190 | 0,597 | 0,788 | 0,861 | 1,039 |
| 200 | 0,603 | 0,796 | 0,870 | 1,050 |
| 210 | 0,609 | 0,804 | 0,879 | 1,060 |
| 220 | 0,615 | 0,811 | 0,887 | 1,070 |
| 230 | 0,620 | 0,818 | 0,895 | 1,080 |
| 240 | 0,625 | 0,825 | 0,902 | 1,089 |
| 250 | 0,631 | 0,832 | 0,910 | 1,098 |
| 260 | 0,636 | 0,839 | 0,917 | 1,107 |
| 270 | 0,640 | 0,845 | 0,924 | 1,115 |
| 280 | 0,645 | 0,851 | 0,931 | 1,123 |
| 290 | 0,650 | 0,857 | 0,937 | 1,131 |
| 300 | 0,654 | 0,863 | 0,943 | 1,139 |
| 310 | 0,658 | 0,869 | 0,950 | 1,146 |
| 320 | 0,662 | 0,874 | 0,956 | 1,153 |
| 330 | 0,667 | 0,880 | 0,962 | 1,161 |
| 340 | 0,671 | 0,885 | 0,967 | 1,168 |
| 350 | 0,674 | 0,890 | 0,973 | 1,174 |
| 360 | 0,678 | 0,895 | 0,979 | 1,181 |
| 370 | 0,682 | 0,900 | 0,984 | 1,187 |
| 380 | 0,686 | 0,905 | 0,989 | 1,194 |
| 390 | 0,689 | 0,909 | 0,994 | 1,200 |

**Table 5** *(concluded)* — Conversion factors from $4\sqrt{S_0}$ to non-proportional gauge lengths

| Cross-sectional area of test piece | Factor for non-proportional gauge length of: | | | |
|---|---|---|---|---|
| mm² | 200 mm | 100 mm | 80 mm | 50 mm |
| 400 | 0,693 | 0,914 | 0,999 | 1,206 |
| 410 | 0,696 | 0,919 | 1,004 | 1,212 |
| 420 | 0,699 | 0,923 | 1,009 | 1,218 |
| 430 | 0,703 | 0,927 | 1,014 | 1,224 |
| 440 | 0,706 | 0,932 | 1,019 | 1,229 |
| 450 | 0,709 | 0,936 | 1,023 | 1,235 |
| 460 | 0,712 | 0,940 | 1,028 | 1,240 |
| 470 | 0,715 | 0,944 | 1,032 | 1,246 |
| 480 | 0,718 | 0,948 | 1,036 | 1,251 |
| 490 | 0,721 | 0,952 | 1,041 | 1,256 |
| 500 | 0,724 | 0,956 | 1,045 | 1,261 |
| 550 | 0,738 | 0,974 | 1,065 | 1,285 |
| 600 | 0,751 | 0,991 | 1,084 | 1,308 |
| 650 | 0,763 | 1,007 | 1,101 | 1,329 |
| 700 | 0,775 | 1,022 | 1,118 | 1,349 |
| 750 | 0,786 | 1,036 | 1,133 | 1,368 |
| 800 | 0,796 | 1,050 | 1,148 | 1,385 |
| 850 | 0,805 | 1,063 | 1,162 | 1,402 |
| 900 | 0,815 | 1,075 | 1,175 | 1,418 |
| 950 | 0,824 | 1,087 | 1,188 | 1,434 |
| 1 000 | 0,832 | 1,098 | 1,200 | 1,449 |
| 1 050 | 0,840 | 1,109 | 1,212 | 1,463 |
| 1 100 | 0,848 | 1,119 | 1,223 | 1,477 |
| 1 150 | 0,856 | 1,129 | 1,234 | 1,490 |
| 1 200 | 0,863 | 1,139 | 1,245 | 1,502 |
| 1 250 | 0,870 | 1,148 | 1,255 | 1,515 |
| 1 300 | 0,877 | 1,157 | 1,265 | 1,527 |
| 1 350 | 0,883 | 1,166 | 1,275 | 1,538 |
| 1 400 | 0,890 | 1,174 | 1,284 | 1,549 |
| 1 450 | 0,896 | 1,183 | 1,293 | 1,560 |
| 1 500 | 0,902 | 1,191 | 1,302 | 1,571 |
| 1 550 | 0,908 | 1,198 | 1,310 | 1,581 |
| 1 600 | 0,914 | 1,206 | 1,319 | 1,591 |
| 1 650 | 0,920 | 1,214 | 1,327 | 1,601 |
| 1 700 | 0,925 | 1,221 | 1,335 | 1,611 |
| 1 750 | 0,931 | 1,228 | 1,343 | 1,620 |
| 1 800 | 0,936 | 1,235 | 1,350 | 1,629 |
| 1 850 | 0,941 | 1,242 | 1,358 | 1,638 |
| 1 900 | 0,946 | 1,248 | 1,365 | 1,647 |
| 1 950 | 0,951 | 1,255 | 1,372 | 1,656 |
| 2 000 | 0,956 | 1,261 | 1,379 | 1,664 |
| 2 050 | 0,960 | 1,267 | 1,386 | 1,672 |
| 2 100 | 0,965 | 1,273 | 1,392 | 1,680 |
| 2 150 | 0,970 | 1,279 | 1,399 | 1,688 |
| 2 200 | 0,974 | 1,285 | 1,405 | 1,696 |
| 2 250 | 0,979 | 1,291 | 1,412 | 1,704 |
| 2 300 | 0,983 | 1,297 | 1,418 | 1,711 |
| 2 350 | 0,987 | 1,302 | 1,424 | 1,719 |
| 2 400 | 0,991 | 1,308 | 1,430 | 1,726 |
| 2 450 | 0,995 | 1,313 | 1,436 | 1,733 |
| 2 500 | 0,999 | 1,319 | 1,442 | 1,740 |
| 2 550 | 1,003 | 1,324 | 1,448 | 1,747 |
| 2 600 | 1,007 | 1,329 | 1,453 | 1,754 |
| 2 650 | 1,011 | 1,334 | 1,459 | 1,760 |
| 2 700 | 1,015 | 1,339 | 1,464 | 1,767 |
| 2 750 | 1,019 | 1,344 | 1,470 | 1,773 |
| 2 800 | 1,022 | 1,349 | 1,475 | 1,780 |
| 2 850 | 1,026 | 1,354 | 1,480 | 1,786 |
| 2 900 | 1,029 | 1,358 | 1,485 | 1,792 |
| 2 950 | 1,033 | 1,363 | 1,490 | 1,799 |
| 3 000 | 1,036 | 1,368 | 1,495 | 1,805 |

**Table 6 — Elongation values[1] on $5{,}65\sqrt{S_0}$ corresponding to those obtained on $4\sqrt{S_0}$ gauge length**

| Actual elongation (%) measured on $4\sqrt{S_0}$ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Corresponding elongation (%) on $5{,}65\sqrt{S_0}$ | | | | | | | | | |
| 10 | 9 | 10 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 20 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 23 | 24 | 25 |
| 30 | 26 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | 33 | 34 |
| 40 | 35 | 36 | 37 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| 50 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 50 | 51 |

1) Factor 0,87. Values rounded to nearest whole number.

**Table 7 — Elongation values[1] on $5{,}65\sqrt{S_0}$ corresponding to those obtained on 50 mm gauge length**

| Actual elongation (%) on 50 mm gauge length | Corresponding elongation (%) on $5{,}65\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 18 | 31 | 27 | 24 | 21 | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 9 | 9 |
| 19 | 33 | 29 | 25 | 22 | 20 | 19 | 18 | 17 | 16 | 15 | 15 | 14 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 |
| 20 | 35 | 30 | 26 | 23 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 10 | 10 |
| 21 | 36 | 32 | 28 | 24 | 22 | 21 | 20 | 18 | 17 | 17 | 16 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 |
| 22 | 38 | 33 | 29 | 25 | 23 | 22 | 21 | 19 | 18 | 17 | 17 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 |
| 23 | 40 | 35 | 30 | 26 | 24 | 23 | 22 | 20 | 19 | 18 | 18 | 17 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 12 | 12 |
| 24 | 42 | 36 | 32 | 27 | 25 | 24 | 23 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 15 | 15 | 15 | 14 | 14 | 13 | 13 | 12 |
| 25 | 43 | 38 | 33 | 29 | 26 | 25 | 24 | 22 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 13 |
| 26 | 45 | 39 | 34 | 30 | 27 | 26 | 25 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 14 | 14 | 13 |
| 27 | 47 | 41 | 35 | 31 | 28 | 27 | 26 | 24 | 22 | 21 | 21 | 19 | 19 | 18 | 17 | 17 | 17 | 16 | 16 | 15 | 14 | 14 |
| 28 | 49 | 42 | 37 | 32 | 30 | 28 | 27 | 25 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 14 |
| 29 | 50 | 44 | 38 | 33 | 31 | 29 | 28 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 | 15 |
| 30 | 52 | 45 | 39 | 34 | 32 | 30 | 29 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 |
| 31 | 54 | 47 | 41 | 35 | 33 | 31 | 30 | 27 | 26 | 25 | 24 | 22 | 21 | 21 | 20 | 19 | 19 | 19 | 18 | 17 | 16 | 16 |
| 32 | 55 | 48 | 42 | 37 | 34 | 32 | 30 | 28 | 27 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 19 | 18 | 17 | 16 |
| 33 | 57 | 50 | 43 | 38 | 35 | 33 | 31 | 29 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 17 | 17 |
| 34 | 59 | 51 | 45 | 39 | 36 | 34 | 32 | 30 | 28 | 27 | 26 | 25 | 23 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 17 |
| 35 | 61 | 53 | 46 | 40 | 37 | 35 | 33 | 31 | 29 | 28 | 27 | 25 | 24 | 23 | 23 | 22 | 21 | 21 | 20 | 19 | 18 | 18 |
| 36 | 62 | 54 | 47 | 41 | 38 | 36 | 34 | 32 | 30 | 29 | 28 | 26 | 25 | 24 | 23 | 23 | 22 | 22 | 21 | 20 | 19 | 18 |
| 37 | 64 | 56 | 49 | 42 | 39 | 37 | 35 | 32 | 31 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 23 | 22 | 21 | 20 | 19 | 19 |
| 38 | 66 | 57 | 50 | 43 | 40 | 38 | 36 | 33 | 31 | 30 | 29 | 27 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 21 | 20 | 19 |
| 39 | 68 | 59 | 51 | 45 | 41 | 39 | 37 | 34 | 32 | 31 | 30 | 28 | 27 | 26 | 25 | 24 | 24 | 23 | 23 | 22 | 20 | 20 |
| 40 | 69 | 60 | 53 | 46 | 42 | 40 | 38 | 35 | 33 | 32 | 31 | 29 | 28 | 27 | 26 | 25 | 25 | 24 | 23 | 22 | 21 | 20 |
| 41 | 71 | 62 | 54 | 47 | 43 | 41 | 39 | 36 | 34 | 32 | 31 | 30 | 28 | 27 | 26 | 26 | 25 | 25 | 24 | 23 | 21 | 21 |
| 42 | 73 | 63 | 55 | 48 | 44 | 42 | 40 | 37 | 35 | 33 | 32 | 30 | 29 | 28 | 27 | 26 | 26 | 25 | 24 | 23 | 22 | 21 |
| 43 | 75 | 65 | 56 | 49 | 45 | 43 | 41 | 38 | 36 | 34 | 33 | 31 | 30 | 29 | 28 | 27 | 26 | 26 | 25 | 24 | 22 | 22 |
| 44 | 76 | 66 | 58 | 50 | 46 | 44 | 42 | 39 | 36 | 35 | 34 | 32 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 24 | 23 | 22 |
| 45 | 78 | 68 | 59 | 51 | 47 | 45 | 43 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 24 | 23 |
| 46 | 80 | 69 | 60 | 53 | 48 | 46 | 44 | 40 | 38 | 36 | 35 | 33 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 25 | 24 | 23 |
| 47 | 81 | 71 | 62 | 54 | 50 | 47 | 45 | 41 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 26 | 25 | 24 |

1) Rounded to the nearest whole number.

**Table 8 — Elongation values[1] on $5,65\sqrt{S_0}$ corresponding to those obtained on 80 mm gauge length**

| Actual elongation (%) on 80 mm gauge length | Corresponding elongation (%) on $5,65\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 21 | 18 | 16 | 14 | 13 | 12 | 11 | 11 | 10 | 10 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 |
| 11 | 23 | 20 | 17 | 15 | 14 | 13 | 13 | 12 | 11 | 11 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 |
| 12 | 25 | 22 | 19 | 17 | 15 | 14 | 14 | 13 | 12 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 7 |
| 13 | 27 | 24 | 21 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 8 | 8 |
| 14 | 29 | 25 | 22 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 13 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 8 |
| 15 | 31 | 27 | 24 | 21 | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 9 | 9 |
| 16 | 33 | 29 | 25 | 22 | 20 | 19 | 18 | 17 | 16 | 15 | 15 | 14 | 13 | 13 | 12 | 12 | 12 | 12 | 11 | 11 | 10 | 10 |
| 17 | 36 | 31 | 27 | 23 | 22 | 20 | 20 | 18 | 17 | 16 | 16 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 10 |
| 18 | 38 | 33 | 29 | 25 | 23 | 22 | 21 | 19 | 18 | 17 | 17 | 16 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 11 | 11 |
| 19 | 40 | 35 | 30 | 26 | 24 | 23 | 22 | 20 | 19 | 18 | 18 | 17 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 12 | 11 |
| 20 | 42 | 36 | 32 | 28 | 25 | 24 | 23 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 12 |
| 21 | 44 | 38 | 33 | 29 | 27 | 25 | 24 | 22 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | 13 | 13 |
| 22 | 46 | 40 | 35 | 30 | 28 | 26 | 25 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 13 |
| 23 | 48 | 42 | 36 | 32 | 29 | 28 | 26 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | 15 | 15 | 14 |
| 24 | 50 | 44 | 38 | 33 | 31 | 29 | 28 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 | 14 |
| 25 | 52 | 46 | 40 | 34 | 32 | 30 | 29 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 19 | 18 | 17 | 17 | 16 | 15 |
| 26 | 54 | 47 | 41 | 36 | 33 | 31 | 30 | 28 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 17 | 16 | 16 |
| 27 | 56 | 49 | 43 | 37 | 34 | 32 | 31 | 29 | 27 | 26 | 25 | 24 | 22 | 22 | 21 | 20 | 20 | 20 | 19 | 18 | 17 | 16 |
| 28 | 59 | 51 | 44 | 39 | 36 | 34 | 32 | 30 | 28 | 27 | 26 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 17 |
| 29 | 61 | 53 | 46 | 40 | 37 | 35 | 33 | 31 | 29 | 28 | 27 | 25 | 24 | 23 | 23 | 22 | 21 | 21 | 20 | 19 | 18 | 17 |
| 30 | 63 | 55 | 48 | 41 | 38 | 36 | 34 | 32 | 30 | 29 | 28 | 26 | 25 | 24 | 23 | 23 | 22 | 22 | 21 | 20 | 19 | 18 |
| 31 | 65 | 56 | 49 | 43 | 39 | 37 | 36 | 33 | 31 | 30 | 29 | 27 | 26 | 25 | 24 | 23 | 23 | 22 | 22 | 21 | 20 | 19 |
| 32 | 67 | 58 | 51 | 44 | 41 | 38 | 37 | 34 | 32 | 31 | 30 | 28 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 21 | 20 | 19 |
| 33 | 69 | 60 | 52 | 46 | 42 | 40 | 38 | 35 | 33 | 32 | 30 | 29 | 27 | 26 | 26 | 25 | 24 | 24 | 23 | 22 | 21 | 20 |
| 34 | 71 | 62 | 54 | 47 | 43 | 41 | 39 | 36 | 34 | 33 | 31 | 30 | 28 | 27 | 26 | 26 | 25 | 25 | 24 | 23 | 21 | 21 |
| 35 | 73 | 64 | 55 | 48 | 45 | 42 | 40 | 37 | 35 | 33 | 32 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 22 | 21 |
| 36 | 75 | 66 | 57 | 50 | 46 | 43 | 41 | 38 | 36 | 34 | 33 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 22 |
| 37 | 77 | 67 | 59 | 51 | 47 | 44 | 43 | 39 | 37 | 35 | 34 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 23 | 22 |
| 38 | 79 | 69 | 60 | 52 | 48 | 46 | 44 | 40 | 38 | 36 | 35 | 33 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 25 | 24 | 23 |
| 39 | 82 | 71 | 62 | 54 | 50 | 47 | 45 | 41 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 26 | 25 | 24 |
| 40 | 84 | 73 | 63 | 55 | 51 | 48 | 46 | 42 | 40 | 38 | 37 | 35 | 33 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 25 | 24 |
| 41 | 86 | 75 | 65 | 57 | 52 | 49 | 47 | 43 | 41 | 39 | 38 | 36 | 34 | 33 | 32 | 31 | 30 | 30 | 29 | 27 | 26 | 25 |
| 42 | 88 | 76 | 67 | 58 | 53 | 50 | 48 | 44 | 42 | 40 | 39 | 37 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 25 |
| 43 | 90 | 78 | 68 | 59 | 55 | 52 | 49 | 46 | 43 | 41 | 40 | 37 | 36 | 35 | 33 | 33 | 32 | 31 | 30 | 29 | 27 | 26 |
| 44 | 92 | 80 | 70 | 61 | 56 | 53 | 51 | 47 | 44 | 42 | 41 | 38 | 37 | 35 | 34 | 33 | 33 | 32 | 31 | 29 | 28 | 27 |
| 45 | 94 | 82 | 71 | 62 | 57 | 54 | 52 | 48 | 45 | 43 | 41 | 39 | 37 | 36 | 35 | 34 | 33 | 33 | 31 | 30 | 28 | 27 |
| 46 | 96 | 84 | 73 | 63 | 59 | 55 | 53 | 49 | 46 | 44 | 42 | 40 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 29 | 28 |
| 47 | 98 | 86 | 74 | 65 | 60 | 56 | 54 | 50 | 47 | 45 | 43 | 41 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 31 | 30 | 28 |

1) Rounded to the nearest whole number.

Table 9 — Elongation values[1] on $5{,}65\sqrt{S_0}$ corresponding to those obtained on 100 mm gauge length

| Actual elongation (%) on 100 mm gauge length | Corresponding elongation (%) on $5{,}65\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 18 | 41 | 36 | 31 | 27 | 25 | 24 | 23 | 21 | 20 | 19 | 18 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 13 | 12 | 12 |
| 19 | 43 | 38 | 33 | 29 | 26 | 25 | 24 | 22 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 13 | 13 |
| 20 | 46 | 40 | 35 | 30 | 28 | 26 | 25 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 13 |
| 21 | 48 | 42 | 36 | 32 | 29 | 28 | 26 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | 15 | 14 | 14 |
| 22 | 50 | 44 | 38 | 33 | 31 | 29 | 28 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 | 15 |
| 23 | 53 | 46 | 40 | 35 | 32 | 30 | 29 | 27 | 25 | 24 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 16 | 15 |
| 24 | 55 | 48 | 42 | 36 | 33 | 32 | 30 | 28 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 16 |
| 25 | 57 | 50 | 43 | 38 | 35 | 33 | 31 | 29 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 17 | 16 |
| 26 | 59 | 52 | 45 | 39 | 36 | 34 | 33 | 30 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 | 17 |
| 27 | 62 | 54 | 47 | 41 | 38 | 35 | 34 | 31 | 30 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 |
| 28 | 64 | 56 | 49 | 42 | 39 | 37 | 35 | 32 | 31 | 29 | 28 | 27 | 25 | 25 | 24 | 23 | 23 | 22 | 21 | 20 | 19 | 18 |
| 29 | 66 | 58 | 50 | 44 | 40 | 38 | 36 | 34 | 32 | 30 | 29 | 28 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 21 | 20 | 19 |
| 30 | 69 | 60 | 52 | 45 | 42 | 39 | 38 | 35 | 33 | 31 | 30 | 29 | 27 | 26 | 26 | 25 | 24 | 24 | 23 | 22 | 21 | 20 |
| 31 | 71 | 62 | 54 | 47 | 43 | 41 | 39 | 36 | 34 | 32 | 31 | 30 | 28 | 27 | 26 | 26 | 25 | 25 | 24 | 23 | 21 | 20 |
| 32 | 73 | 64 | 55 | 48 | 45 | 42 | 40 | 37 | 35 | 33 | 32 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 22 | 21 |
| 33 | 75 | 66 | 57 | 50 | 46 | 43 | 41 | 38 | 36 | 35 | 33 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 22 |
| 34 | 78 | 68 | 59 | 51 | 47 | 45 | 43 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 23 | 22 |
| 35 | 80 | 70 | 61 | 53 | 49 | 46 | 44 | 41 | 38 | 37 | 35 | 33 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 26 | 24 | 23 |
| 36 | 82 | 72 | 62 | 54 | 50 | 47 | 45 | 42 | 39 | 38 | 36 | 34 | 33 | 32 | 31 | 30 | 29 | 29 | 28 | 26 | 25 | 24 |
| 37 | 85 | 74 | 64 | 56 | 51 | 49 | 46 | 43 | 40 | 39 | 37 | 35 | 34 | 32 | 31 | 31 | 30 | 29 | 28 | 27 | 26 | 24 |
| 38 | 87 | 76 | 66 | 57 | 53 | 50 | 48 | 44 | 42 | 40 | 38 | 36 | 35 | 33 | 32 | 31 | 31 | 30 | 29 | 28 | 26 | 25 |
| 39 | 89 | 78 | 68 | 59 | 54 | 51 | 49 | 45 | 43 | 41 | 39 | 37 | 36 | 34 | 33 | 32 | 32 | 31 | 30 | 28 | 27 | 26 |
| 40 | 91 | 80 | 69 | 60 | 56 | 53 | 50 | 46 | 44 | 42 | 40 | 38 | 36 | 35 | 34 | 33 | 32 | 32 | 31 | 29 | 28 | 26 |
| 41 | 94 | 82 | 71 | 62 | 57 | 54 | 51 | 47 | 45 | 43 | 41 | 39 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 28 | 27 |
| 42 | 96 | 84 | 73 | 63 | 58 | 55 | 53 | 49 | 46 | 44 | 42 | 40 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 29 | 28 |
| 43 | 98 | 86 | 75 | 65 | 60 | 56 | 54 | 50 | 47 | 45 | 43 | 41 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 31 | 30 | 28 |
| 44 | 101 | 88 | 76 | 66 | 61 | 58 | 55 | 51 | 48 | 46 | 44 | 42 | 40 | 39 | 37 | 36 | 36 | 35 | 34 | 32 | 30 | 29 |
| 45 | 103 | 90 | 78 | 68 | 63 | 59 | 57 | 52 | 49 | 47 | 45 | 43 | 41 | 39 | 38 | 37 | 36 | 36 | 34 | 33 | 31 | 30 |
| 46 | 105 | 92 | 80 | 69 | 64 | 60 | 58 | 53 | 50 | 48 | 46 | 44 | 42 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 32 | 30 |
| 47 | 107 | 94 | 81 | 71 | 65 | 62 | 59 | 54 | 51 | 49 | 47 | 45 | 43 | 41 | 40 | 39 | 38 | 37 | 36 | 34 | 32 | 31 |

1) Rounded to the nearest whole number.

Table 10 — Elongation values[1] on $5,65\sqrt{S_0}$ corresponding to those obtained on 200 mm gauge length

| Actual elongation (%) on 200 mm gauge length | Corresponding elongation (%) on $5,65\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 18 | 54 | 47 | 41 | 36 | 33 | 31 | 30 | 28 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 17 | 16 | 16 |
| 19 | 57 | 50 | 43 | 38 | 35 | 33 | 31 | 29 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 17 | 17 |
| 20 | 60 | 53 | 46 | 40 | 37 | 35 | 33 | 31 | 29 | 28 | 27 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 | 17 |
| 21 | 63 | 55 | 48 | 42 | 39 | 36 | 35 | 32 | 30 | 29 | 28 | 26 | 25 | 24 | 24 | 23 | 22 | 22 | 21 | 20 | 19 | 18 |
| 22 | 66 | 58 | 50 | 44 | 40 | 38 | 36 | 34 | 32 | 30 | 29 | 28 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 21 | 20 | 19 |
| 23 | 69 | 60 | 53 | 46 | 42 | 40 | 38 | 35 | 33 | 32 | 31 | 29 | 28 | 27 | 26 | 25 | 25 | 24 | 23 | 22 | 21 | 20 |
| 24 | 72 | 63 | 55 | 48 | 44 | 42 | 40 | 37 | 35 | 33 | 32 | 30 | 29 | 28 | 27 | 26 | 26 | 25 | 24 | 23 | 22 | 21 |
| 25 | 75 | 66 | 57 | 50 | 46 | 43 | 41 | 38 | 36 | 34 | 33 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 22 |
| 26 | 78 | 68 | 59 | 52 | 48 | 45 | 43 | 40 | 38 | 36 | 35 | 33 | 31 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 24 | 23 |
| 27 | 81 | 71 | 62 | 54 | 50 | 47 | 45 | 41 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 26 | 25 | 24 |
| 28 | 84 | 74 | 64 | 56 | 51 | 49 | 46 | 43 | 40 | 39 | 37 | 35 | 34 | 32 | 31 | 31 | 30 | 29 | 28 | 27 | 25 | 24 |
| 29 | 87 | 76 | 66 | 58 | 53 | 50 | 48 | 44 | 42 | 40 | 39 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 26 | 25 |
| 30 | 91 | 79 | 69 | 60 | 55 | 52 | 50 | 46 | 43 | 41 | 40 | 38 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 27 | 26 |
| 31 | 94 | 81 | 71 | 62 | 57 | 54 | 51 | 47 | 45 | 43 | 41 | 39 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 28 | 27 |
| 32 | 97 | 84 | 73 | 64 | 59 | 55 | 53 | 49 | 46 | 44 | 43 | 40 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 29 | 28 |
| 33 | 100 | 87 | 75 | 66 | 61 | 57 | 55 | 50 | 48 | 46 | 44 | 41 | 40 | 38 | 37 | 36 | 35 | 35 | 33 | 32 | 30 | 29 |
| 34 | 103 | 89 | 78 | 68 | 62 | 59 | 56 | 52 | 49 | 47 | 45 | 43 | 41 | 39 | 38 | 37 | 36 | 36 | 34 | 33 | 31 | 30 |
| 35 | 106 | 92 | 80 | 70 | 64 | 61 | 58 | 53 | 50 | 48 | 47 | 44 | 42 | 41 | 39 | 38 | 37 | 37 | 35 | 34 | 32 | 30 |
| 36 | 109 | 95 | 82 | 72 | 66 | 62 | 60 | 55 | 52 | 50 | 48 | 45 | 43 | 42 | 40 | 39 | 38 | 38 | 36 | 35 | 33 | 31 |
| 37 | 112 | 97 | 85 | 74 | 68 | 64 | 61 | 57 | 53 | 51 | 49 | 46 | 44 | 43 | 42 | 40 | 40 | 39 | 37 | 36 | 34 | 32 |
| 38 | 115 | 100 | 87 | 76 | 70 | 66 | 63 | 58 | 55 | 52 | 51 | 48 | 46 | 44 | 43 | 42 | 41 | 40 | 38 | 37 | 35 | 33 |
| 39 | 118 | 102 | 89 | 78 | 72 | 68 | 65 | 60 | 56 | 54 | 52 | 49 | 47 | 45 | 44 | 43 | 42 | 41 | 39 | 38 | 36 | 34 |
| 40 | 121 | 105 | 91 | 80 | 73 | 69 | 66 | 61 | 58 | 55 | 53 | 50 | 48 | 46 | 45 | 44 | 43 | 42 | 40 | 39 | 36 | 35 |
| 41 | 124 | 108 | 94 | 82 | 75 | 71 | 68 | 63 | 59 | 57 | 55 | 51 | 49 | 47 | 46 | 45 | 44 | 43 | 41 | 40 | 37 | 36 |
| 42 | 127 | 110 | 96 | 84 | 77 | 73 | 70 | 64 | 61 | 58 | 56 | 53 | 50 | 49 | 47 | 46 | 45 | 44 | 42 | 40 | 38 | 37 |
| 43 | 130 | 113 | 98 | 86 | 79 | 75 | 71 | 66 | 62 | 59 | 57 | 54 | 52 | 50 | 48 | 47 | 46 | 45 | 43 | 41 | 39 | 37 |
| 44 | 133 | 116 | 101 | 88 | 81 | 76 | 73 | 67 | 63 | 61 | 59 | 55 | 53 | 51 | 49 | 48 | 47 | 46 | 44 | 42 | 40 | 38 |
| 45 | 136 | 118 | 103 | 90 | 83 | 78 | 75 | 69 | 65 | 62 | 60 | 57 | 54 | 52 | 51 | 49 | 48 | 47 | 45 | 43 | 41 | 39 |
| 46 | 139 | 121 | 105 | 92 | 84 | 80 | 76 | 70 | 66 | 63 | 61 | 58 | 55 | 53 | 52 | 50 | 49 | 48 | 46 | 44 | 42 | 40 |
| 47 | 142 | 123 | 107 | 94 | 86 | 81 | 78 | 72 | 68 | 65 | 63 | 59 | 56 | 54 | 53 | 51 | 50 | 49 | 47 | 45 | 43 | 41 |

1) Rounded to the nearest whole number.

Table 11 — Elongation values[1] on $4\sqrt{S_0}$ corresponding to those obtained on 50 mm gauge length

| Actual elongation (%) on 50 mm gauge length | Corresponding elongation (%) on $4\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 18 | 36 | 31 | 27 | 24 | 22 | 21 | 20 | 18 | 17 | 16 | 16 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 10 |
| 19 | 38 | 33 | 29 | 25 | 23 | 22 | 21 | 19 | 18 | 17 | 17 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 11 | 11 |
| 20 | 40 | 35 | 30 | 26 | 24 | 23 | 22 | 20 | 19 | 18 | 18 | 17 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 12 | 11 |
| 21 | 42 | 36 | 32 | 28 | 25 | 24 | 23 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 12 |
| 22 | 44 | 38 | 33 | 29 | 27 | 25 | 24 | 22 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | 13 | 13 |
| 23 | 46 | 40 | 35 | 30 | 28 | 26 | 25 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 13 |
| 24 | 48 | 42 | 36 | 32 | 29 | 27 | 26 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | 15 | 14 | 14 |
| 25 | 50 | 43 | 38 | 33 | 30 | 29 | 27 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 | 14 |
| 26 | 52 | 45 | 39 | 34 | 32 | 30 | 28 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 |
| 27 | 54 | 47 | 41 | 35 | 33 | 31 | 30 | 27 | 26 | 25 | 24 | 22 | 21 | 21 | 20 | 19 | 19 | 19 | 18 | 17 | 16 | 16 |
| 28 | 56 | 49 | 42 | 37 | 34 | 32 | 31 | 28 | 27 | 26 | 25 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 19 | 18 | 17 | 16 |
| 29 | 58 | 50 | 44 | 38 | 35 | 33 | 32 | 29 | 28 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 17 | 17 |
| 30 | 60 | 52 | 45 | 39 | 36 | 34 | 33 | 30 | 29 | 27 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 | 17 |
| 31 | 62 | 54 | 47 | 41 | 38 | 35 | 34 | 31 | 30 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 |
| 32 | 64 | 55 | 48 | 42 | 39 | 37 | 35 | 32 | 30 | 29 | 28 | 27 | 25 | 24 | 24 | 23 | 23 | 22 | 21 | 20 | 19 | 18 |
| 33 | 66 | 57 | 50 | 43 | 40 | 38 | 36 | 33 | 31 | 30 | 29 | 27 | 26 | 25 | 24 | 24 | 23 | 23 | 22 | 21 | 20 | 19 |
| 34 | 68 | 59 | 51 | 45 | 41 | 39 | 37 | 34 | 32 | 31 | 30 | 28 | 27 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 20 | 20 |
| 35 | 70 | 61 | 53 | 46 | 42 | 40 | 38 | 35 | 33 | 32 | 31 | 29 | 28 | 27 | 26 | 25 | 25 | 24 | 23 | 22 | 21 | 20 |
| 36 | 72 | 62 | 54 | 47 | 44 | 41 | 39 | 36 | 34 | 33 | 32 | 30 | 29 | 28 | 27 | 26 | 25 | 25 | 24 | 23 | 22 | 21 |
| 37 | 74 | 64 | 56 | 49 | 45 | 42 | 40 | 37 | 35 | 34 | 32 | 31 | 29 | 28 | 27 | 27 | 26 | 26 | 25 | 24 | 22 | 21 |
| 38 | 76 | 66 | 57 | 50 | 46 | 43 | 42 | 38 | 36 | 35 | 33 | 32 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 22 |
| 39 | 78 | 68 | 59 | 51 | 47 | 45 | 43 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 23 | 22 |
| 40 | 80 | 69 | 60 | 53 | 48 | 46 | 44 | 40 | 38 | 36 | 35 | 33 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 25 | 24 | 23 |
| 41 | 82 | 71 | 62 | 54 | 50 | 47 | 45 | 41 | 39 | 37 | 36 | 34 | 33 | 31 | 30 | 30 | 29 | 28 | 27 | 26 | 25 | 24 |
| 42 | 84 | 73 | 63 | 55 | 51 | 48 | 46 | 42 | 40 | 38 | 37 | 35 | 33 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 25 | 24 |
| 43 | 86 | 75 | 65 | 57 | 52 | 49 | 47 | 43 | 41 | 39 | 38 | 36 | 34 | 33 | 32 | 31 | 30 | 30 | 29 | 27 | 26 | 25 |
| 44 | 88 | 76 | 66 | 58 | 53 | 50 | 48 | 44 | 42 | 40 | 39 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 26 | 25 |
| 45 | 90 | 78 | 68 | 59 | 55 | 51 | 49 | 45 | 43 | 41 | 40 | 37 | 36 | 34 | 33 | 32 | 32 | 31 | 30 | 29 | 27 | 26 |
| 46 | 92 | 80 | 69 | 60 | 56 | 53 | 50 | 46 | 44 | 42 | 40 | 38 | 36 | 35 | 34 | 33 | 32 | 32 | 31 | 29 | 28 | 26 |
| 47 | 94 | 81 | 71 | 62 | 57 | 54 | 51 | 47 | 45 | 43 | 41 | 39 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 28 | 27 |

1) Rounded to the nearest whole number.

**Table 12 — Elongation values [1] on $4\sqrt{S_0}$ corresponding to those obtained on 80 mm gauge length**

| Actual elongation (%) on 80 mm gauge length | Corresponding elongation (%) on $4\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 24 | 21 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 11 | 11 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 |
| 11 | 26 | 23 | 20 | 17 | 16 | 15 | 14 | 13 | 13 | 12 | 12 | 11 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 |
| 12 | 29 | 25 | 22 | 19 | 17 | 16 | 16 | 14 | 14 | 13 | 13 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 9 | 9 | 8 |
| 13 | 31 | 27 | 23 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 9 | 9 |
| 14 | 33 | 29 | 25 | 22 | 20 | 19 | 18 | 17 | 16 | 15 | 15 | 14 | 13 | 13 | 12 | 12 | 12 | 12 | 11 | 11 | 10 | 10 |
| 15 | 36 | 31 | 27 | 24 | 22 | 21 | 20 | 18 | 17 | 16 | 16 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 10 |
| 16 | 38 | 33 | 29 | 25 | 23 | 22 | 21 | 19 | 18 | 17 | 17 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 12 | 12 | 11 |
| 17 | 41 | 35 | 31 | 27 | 25 | 23 | 22 | 21 | 19 | 19 | 18 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 12 | 12 |
| 18 | 43 | 37 | 33 | 28 | 26 | 25 | 24 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 12 |
| 19 | 45 | 39 | 34 | 30 | 28 | 26 | 25 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 14 | 14 | 13 |
| 20 | 48 | 42 | 36 | 31 | 29 | 27 | 26 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 17 | 15 | 15 | 14 | 14 |
| 21 | 50 | 44 | 38 | 33 | 30 | 29 | 27 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 | 14 |
| 22 | 52 | 46 | 40 | 35 | 32 | 30 | 29 | 27 | 25 | 24 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 16 | 15 |
| 23 | 55 | 48 | 42 | 36 | 33 | 31 | 30 | 28 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 16 |
| 24 | 57 | 50 | 43 | 38 | 35 | 33 | 31 | 29 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 17 | 17 |
| 25 | 60 | 52 | 45 | 39 | 36 | 34 | 33 | 30 | 29 | 27 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 | 17 |
| 26 | 62 | 54 | 47 | 41 | 38 | 36 | 34 | 31 | 30 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 |
| 27 | 64 | 56 | 49 | 42 | 39 | 37 | 35 | 33 | 31 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 23 | 22 | 22 | 21 | 19 | 19 |
| 28 | 67 | 58 | 51 | 44 | 41 | 38 | 37 | 34 | 32 | 31 | 29 | 28 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 21 | 20 | 19 |
| 29 | 69 | 60 | 52 | 46 | 42 | 40 | 38 | 35 | 33 | 32 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 21 | 20 |
| 30 | 72 | 62 | 54 | 47 | 44 | 41 | 39 | 36 | 34 | 33 | 32 | 30 | 28 | 27 | 27 | 26 | 25 | 25 | 24 | 23 | 22 | 21 |
| 31 | 74 | 64 | 56 | 49 | 45 | 42 | 41 | 37 | 35 | 34 | 33 | 31 | 29 | 28 | 28 | 27 | 26 | 26 | 25 | 24 | 22 | 21 |
| 32 | 76 | 66 | 58 | 50 | 46 | 44 | 42 | 39 | 36 | 35 | 34 | 32 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 24 | 23 | 22 |
| 33 | 79 | 68 | 60 | 52 | 48 | 45 | 43 | 40 | 38 | 36 | 35 | 33 | 31 | 30 | 29 | 29 | 28 | 27 | 26 | 25 | 24 | 23 |
| 34 | 81 | 71 | 61 | 53 | 49 | 47 | 45 | 41 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 29 | 29 | 28 | 27 | 26 | 24 | 23 |
| 35 | 83 | 73 | 63 | 55 | 51 | 48 | 46 | 42 | 40 | 38 | 37 | 35 | 33 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 25 | 24 |
| 36 | 86 | 75 | 65 | 57 | 52 | 49 | 47 | 43 | 41 | 39 | 38 | 36 | 34 | 33 | 32 | 31 | 30 | 30 | 29 | 27 | 26 | 25 |
| 37 | 88 | 77 | 67 | 58 | 54 | 51 | 48 | 45 | 42 | 40 | 39 | 37 | 35 | 34 | 33 | 32 | 31 | 31 | 29 | 28 | 27 | 25 |
| 38 | 91 | 79 | 69 | 60 | 55 | 52 | 50 | 46 | 43 | 41 | 40 | 38 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 27 | 26 |
| 39 | 93 | 81 | 70 | 61 | 57 | 53 | 51 | 47 | 44 | 43 | 41 | 39 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 28 | 27 |
| 40 | 95 | 83 | 72 | 63 | 58 | 55 | 52 | 48 | 46 | 44 | 42 | 40 | 38 | 37 | 35 | 35 | 34 | 33 | 32 | 30 | 29 | 28 |
| 41 | 98 | 85 | 74 | 64 | 59 | 56 | 54 | 50 | 47 | 45 | 43 | 41 | 39 | 38 | 36 | 35 | 35 | 34 | 33 | 31 | 29 | 28 |
| 42 | 100 | 87 | 76 | 66 | 61 | 58 | 55 | 51 | 48 | 46 | 44 | 42 | 40 | 38 | 37 | 36 | 35 | 35 | 33 | 32 | 30 | 29 |
| 43 | 103 | 89 | 78 | 68 | 62 | 59 | 56 | 52 | 49 | 47 | 45 | 43 | 41 | 39 | 38 | 37 | 36 | 36 | 34 | 33 | 31 | 30 |
| 44 | 105 | 91 | 79 | 69 | 64 | 60 | 58 | 53 | 50 | 48 | 46 | 44 | 42 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 32 | 30 |
| 45 | 107 | 93 | 81 | 71 | 65 | 62 | 59 | 54 | 51 | 49 | 47 | 45 | 43 | 41 | 40 | 39 | 38 | 37 | 36 | 34 | 32 | 31 |
| 46 | 110 | 95 | 83 | 72 | 67 | 63 | 60 | 56 | 52 | 50 | 48 | 46 | 44 | 42 | 41 | 40 | 39 | 38 | 37 | 35 | 33 | 32 |
| 47 | 112 | 98 | 85 | 74 | 68 | 64 | 62 | 57 | 54 | 51 | 49 | 47 | 45 | 43 | 42 | 41 | 40 | 39 | 37 | 36 | 34 | 32 |

1) Rounded to the nearest whole number.

Table 13 — Elongation values [1] on $4\sqrt{S_0}$ corresponding to those obtained on 100 mm gauge length

| Actual elongation (%) on 100 mm gauge length | Corresponding elongation (%) on $4\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 18 | 47 | 41 | 36 | 31 | 29 | 27 | 26 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 14 | 14 |
| 19 | 50 | 43 | 38 | 33 | 30 | 29 | 27 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 15 | 14 |
| 20 | 53 | 46 | 40 | 35 | 32 | 30 | 29 | 27 | 25 | 24 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 16 | 15 |
| 21 | 55 | 48 | 42 | 36 | 34 | 32 | 30 | 28 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 18 | 17 | 16 |
| 22 | 58 | 50 | 44 | 38 | 35 | 33 | 32 | 29 | 28 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 20 | 20 | 19 | 18 | 17 | 17 |
| 23 | 60 | 53 | 46 | 40 | 37 | 35 | 33 | 31 | 29 | 28 | 27 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 18 | 17 |
| 24 | 63 | 55 | 48 | 42 | 38 | 36 | 35 | 32 | 30 | 29 | 28 | 26 | 25 | 24 | 23 | 23 | 22 | 22 | 21 | 20 | 19 | 18 |
| 25 | 66 | 57 | 50 | 43 | 40 | 38 | 36 | 33 | 31 | 30 | 29 | 27 | 26 | 25 | 24 | 24 | 23 | 23 | 22 | 21 | 20 | 19 |
| 26 | 68 | 59 | 52 | 45 | 42 | 39 | 38 | 35 | 33 | 31 | 30 | 28 | 27 | 26 | 25 | 25 | 24 | 24 | 23 | 22 | 21 | 20 |
| 27 | 71 | 62 | 54 | 47 | 43 | 41 | 39 | 36 | 34 | 32 | 31 | 30 | 28 | 27 | 26 | 26 | 25 | 25 | 24 | 23 | 21 | 20 |
| 28 | 74 | 64 | 56 | 49 | 45 | 42 | 40 | 37 | 35 | 34 | 32 | 31 | 29 | 28 | 27 | 27 | 26 | 26 | 25 | 24 | 22 | 21 |
| 29 | 76 | 66 | 58 | 50 | 46 | 44 | 42 | 39 | 36 | 35 | 34 | 32 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 24 | 23 | 22 |
| 30 | 79 | 69 | 60 | 52 | 48 | 45 | 43 | 40 | 38 | 36 | 35 | 33 | 31 | 30 | 29 | 29 | 28 | 27 | 26 | 25 | 24 | 23 |
| 31 | 81 | 71 | 62 | 54 | 50 | 47 | 45 | 41 | 39 | 37 | 36 | 34 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 26 | 25 | 24 |
| 32 | 84 | 73 | 64 | 55 | 51 | 48 | 46 | 43 | 40 | 38 | 37 | 35 | 33 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 25 | 24 |
| 33 | 87 | 76 | 66 | 57 | 53 | 50 | 48 | 44 | 41 | 40 | 38 | 36 | 35 | 33 | 32 | 31 | 31 | 30 | 29 | 28 | 26 | 25 |
| 34 | 89 | 78 | 68 | 59 | 54 | 51 | 49 | 45 | 43 | 41 | 39 | 37 | 36 | 34 | 33 | 32 | 32 | 31 | 30 | 29 | 27 | 26 |
| 35 | 92 | 80 | 70 | 61 | 56 | 53 | 51 | 47 | 44 | 42 | 41 | 38 | 37 | 35 | 34 | 33 | 33 | 32 | 31 | 29 | 28 | 27 |
| 36 | 95 | 82 | 72 | 62 | 58 | 54 | 52 | 48 | 45 | 43 | 42 | 39 | 38 | 36 | 35 | 34 | 33 | 33 | 32 | 30 | 29 | 27 |
| 37 | 97 | 85 | 74 | 64 | 59 | 56 | 53 | 49 | 46 | 44 | 43 | 40 | 39 | 37 | 36 | 35 | 34 | 34 | 32 | 31 | 29 | 28 |
| 38 | 100 | 87 | 76 | 66 | 61 | 57 | 55 | 51 | 48 | 46 | 44 | 42 | 40 | 38 | 37 | 36 | 35 | 35 | 33 | 32 | 30 | 29 |
| 39 | 102 | 89 | 78 | 68 | 62 | 59 | 56 | 52 | 49 | 47 | 45 | 43 | 41 | 39 | 38 | 37 | 36 | 36 | 34 | 33 | 31 | 30 |
| 40 | 105 | 92 | 80 | 69 | 64 | 60 | 58 | 53 | 50 | 48 | 46 | 44 | 42 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 32 | 30 |
| 41 | 108 | 94 | 82 | 71 | 66 | 62 | 59 | 55 | 52 | 49 | 48 | 45 | 43 | 41 | 40 | 39 | 38 | 37 | 36 | 34 | 33 | 31 |
| 42 | 110 | 96 | 84 | 73 | 67 | 63 | 61 | 56 | 53 | 50 | 49 | 46 | 44 | 42 | 41 | 40 | 39 | 38 | 37 | 35 | 33 | 32 |
| 43 | 113 | 98 | 86 | 75 | 69 | 65 | 62 | 57 | 54 | 52 | 50 | 47 | 45 | 43 | 42 | 41 | 40 | 39 | 38 | 36 | 34 | 33 |
| 44 | 116 | 101 | 88 | 76 | 70 | 66 | 64 | 59 | 55 | 53 | 51 | 48 | 46 | 44 | 43 | 42 | 41 | 40 | 39 | 37 | 35 | 33 |
| 45 | 118 | 103 | 90 | 78 | 72 | 68 | 65 | 60 | 57 | 54 | 52 | 49 | 47 | 45 | 44 | 43 | 42 | 41 | 40 | 38 | 36 | 34 |
| 46 | 121 | 105 | 92 | 80 | 74 | 69 | 66 | 61 | 58 | 55 | 53 | 50 | 48 | 46 | 45 | 44 | 43 | 42 | 40 | 39 | 36 | 35 |
| 47 | 124 | 108 | 94 | 81 | 75 | 71 | 68 | 63 | 59 | 56 | 54 | 51 | 49 | 47 | 46 | 45 | 44 | 43 | 41 | 39 | 37 | 36 |

1) Rounded to the nearest whole number.

**Table 14 — Elongation values[1] on $4\sqrt{S_0}$ corresponding to those obtained on 200 mm gauge length**

| Actual elongation (%) on 200 mm gauge length | Corresponding elongation (%) on $4\sqrt{S_0}$ gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 18 | 62 | 54 | 47 | 41 | 38 | 36 | 34 | 32 | 30 | 29 | 28 | 26 | 25 | 24 | 23 | 23 | 22 | 22 | 21 | 20 | 19 | 18 |
| 19 | 66 | 57 | 50 | 43 | 40 | 38 | 36 | 33 | 32 | 30 | 29 | 27 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 21 | 20 | 19 |
| 20 | 69 | 60 | 53 | 46 | 42 | 40 | 38 | 35 | 33 | 32 | 31 | 29 | 28 | 27 | 26 | 25 | 25 | 24 | 23 | 22 | 21 | 20 |
| 21 | 73 | 63 | 55 | 48 | 44 | 42 | 40 | 37 | 35 | 33 | 32 | 30 | 30 | 28 | 27 | 26 | 26 | 25 | 24 | 23 | 22 | 21 |
| 22 | 76 | 66 | 58 | 50 | 46 | 44 | 42 | 39 | 36 | 35 | 34 | 32 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 24 | 23 | 22 |
| 23 | 80 | 69 | 60 | 53 | 49 | 46 | 44 | 40 | 38 | 36 | 35 | 33 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 25 | 24 | 23 |
| 24 | 83 | 72 | 63 | 55 | 51 | 48 | 46 | 42 | 40 | 38 | 37 | 35 | 33 | 32 | 31 | 30 | 29 | 29 | 28 | 27 | 25 | 24 |
| 25 | 87 | 75 | 66 | 57 | 53 | 50 | 48 | 44 | 41 | 40 | 38 | 36 | 35 | 33 | 32 | 31 | 31 | 30 | 29 | 28 | 26 | 25 |
| 26 | 90 | 78 | 68 | 59 | 55 | 52 | 50 | 46 | 43 | 41 | 40 | 38 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 27 | 26 |
| 27 | 94 | 82 | 71 | 62 | 57 | 54 | 51 | 47 | 45 | 43 | 41 | 39 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 28 | 27 |
| 28 | 97 | 85 | 74 | 64 | 59 | 56 | 53 | 49 | 46 | 44 | 43 | 40 | 39 | 37 | 36 | 35 | 34 | 34 | 32 | 31 | 29 | 28 |
| 29 | 101 | 88 | 76 | 66 | 61 | 58 | 55 | 51 | 48 | 46 | 44 | 42 | 40 | 39 | 37 | 36 | 36 | 35 | 34 | 32 | 30 | 29 |
| 30 | 104 | 91 | 79 | 69 | 63 | 60 | 57 | 53 | 50 | 48 | 46 | 43 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 33 | 31 | 30 |
| 31 | 108 | 94 | 81 | 71 | 65 | 62 | 59 | 54 | 51 | 49 | 47 | 45 | 43 | 41 | 40 | 39 | 38 | 37 | 36 | 34 | 32 | 31 |
| 32 | 111 | 97 | 84 | 73 | 68 | 64 | 61 | 56 | 53 | 51 | 49 | 46 | 44 | 43 | 41 | 40 | 39 | 38 | 37 | 35 | 33 | 32 |
| 33 | 114 | 100 | 87 | 76 | 70 | 66 | 63 | 58 | 55 | 52 | 50 | 48 | 46 | 44 | 43 | 41 | 41 | 40 | 38 | 37 | 35 | 33 |
| 34 | 118 | 103 | 89 | 78 | 72 | 68 | 65 | 60 | 56 | 54 | 52 | 49 | 47 | 45 | 44 | 43 | 42 | 41 | 39 | 38 | 36 | 34 |
| 35 | 121 | 106 | 92 | 80 | 74 | 70 | 67 | 61 | 58 | 56 | 54 | 51 | 48 | 47 | 45 | 44 | 43 | 42 | 41 | 39 | 37 | 35 |
| 36 | 125 | 109 | 95 | 82 | 76 | 72 | 69 | 63 | 60 | 57 | 55 | 52 | 50 | 48 | 46 | 45 | 44 | 43 | 42 | 40 | 38 | 36 |
| 37 | 128 | 112 | 97 | 85 | 78 | 74 | 70 | 65 | 61 | 59 | 57 | 53 | 51 | 49 | 48 | 46 | 45 | 44 | 43 | 41 | 39 | 37 |
| 38 | 132 | 115 | 100 | 87 | 80 | 76 | 72 | 67 | 63 | 60 | 58 | 55 | 52 | 51 | 49 | 48 | 47 | 46 | 44 | 42 | 40 | 38 |
| 39 | 135 | 118 | 102 | 89 | 82 | 78 | 74 | 69 | 65 | 62 | 60 | 56 | 54 | 52 | 50 | 49 | 48 | 47 | 45 | 43 | 41 | 39 |
| 40 | 139 | 121 | 105 | 92 | 84 | 80 | 76 | 70 | 66 | 63 | 61 | 58 | 55 | 53 | 52 | 50 | 49 | 48 | 46 | 44 | 42 | 40 |
| 41 | 142 | 124 | 108 | 94 | 87 | 82 | 78 | 72 | 68 | 65 | 63 | 59 | 57 | 55 | 53 | 52 | 50 | 49 | 48 | 45 | 43 | 41 |
| 42 | 146 | 127 | 110 | 96 | 89 | 84 | 80 | 74 | 70 | 67 | 64 | 61 | 58 | 56 | 54 | 53 | 52 | 50 | 49 | 47 | 44 | 42 |
| 43 | 149 | 130 | 113 | 98 | 91 | 86 | 82 | 76 | 71 | 68 | 66 | 62 | 59 | 57 | 56 | 54 | 53 | 52 | 50 | 48 | 45 | 43 |
| 44 | 153 | 133 | 116 | 101 | 93 | 88 | 84 | 77 | 73 | 70 | 67 | 64 | 61 | 59 | 57 | 55 | 54 | 53 | 51 | 49 | 46 | 44 |
| 45 | 156 | 136 | 118 | 103 | 95 | 90 | 86 | 79 | 75 | 71 | 69 | 65 | 62 | 60 | 58 | 57 | 55 | 54 | 52 | 50 | 47 | 45 |
| 46 | 160 | 139 | 121 | 105 | 97 | 92 | 88 | 81 | 76 | 73 | 70 | 66 | 64 | 61 | 59 | 58 | 56 | 55 | 53 | 51 | 48 | 46 |
| 47 | 163 | 142 | 124 | 108 | 99 | 94 | 90 | 83 | 78 | 75 | 72 | 68 | 65 | 63 | 61 | 59 | 58 | 56 | 54 | 52 | 49 | 47 |

1) Rounded to the nearest whole number.

**Table 15 — Elongation values[1] on 50 mm corresponding to those obtained on $5{,}65\sqrt{S_0}$ gauge length**

| Actual elongation (%) on $5{,}65\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 50 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 6 | 7 | 8 | 9 | 9 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 16 | 16 | 16 | 17 | 17 | 18 | 19 | 20 |
| 11 | 6 | 7 | 8 | 10 | 10 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 16 | 17 | 17 | 18 | 18 | 18 | 19 | 20 | 21 | 22 |
| 12 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 17 | 17 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 24 |
| 13 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 16 | 16 | 17 | 18 | 19 | 20 | 21 | 21 | 22 | 22 | 23 | 25 | 26 |
| 14 | 8 | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 23 | 24 | 25 | 27 | 28 |
| 15 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 23 | 24 | 24 | 25 | 26 | 27 | 29 | 30 |
| 16 | 9 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 25 | 26 | 27 | 28 | 29 | 31 | 32 |
| 17 | 10 | 11 | 13 | 15 | 16 | 17 | 18 | 19 | 21 | 21 | 22 | 24 | 25 | 26 | 27 | 28 | 28 | 28 | 29 | 31 | 33 | 34 |
| 18 | 10 | 12 | 14 | 16 | 17 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 33 | 34 | 36 |
| 19 | 11 | 13 | 14 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26 | 28 | 29 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 38 |
| 20 | 12 | 13 | 15 | 17 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 33 | 33 | 35 | 36 | 38 | 40 |
| 21 | 12 | 14 | 16 | 18 | 20 | 21 | 22 | 24 | 25 | 27 | 27 | 29 | 30 | 32 | 33 | 33 | 34 | 35 | 36 | 38 | 40 | 42 |
| 22 | 13 | 15 | 17 | 19 | 21 | 22 | 23 | 25 | 27 | 28 | 29 | 30 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 40 | 42 | 44 |
| 23 | 13 | 15 | 18 | 20 | 22 | 23 | 24 | 26 | 28 | 29 | 30 | 32 | 33 | 35 | 36 | 37 | 37 | 38 | 40 | 42 | 44 | 46 |
| 24 | 14 | 16 | 18 | 21 | 23 | 24 | 25 | 27 | 29 | 30 | 31 | 33 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 43 | 46 | 48 |
| 25 | 14 | 17 | 19 | 22 | 24 | 25 | 26 | 28 | 30 | 32 | 33 | 35 | 36 | 38 | 39 | 40 | 41 | 42 | 43 | 45 | 48 | 50 |
| 26 | 15 | 17 | 20 | 23 | 25 | 26 | 27 | 30 | 31 | 33 | 34 | 36 | 38 | 39 | 40 | 41 | 42 | 43 | 45 | 47 | 50 | 52 |
| 27 | 16 | 18 | 21 | 24 | 26 | 27 | 28 | 31 | 33 | 34 | 35 | 37 | 39 | 41 | 42 | 43 | 44 | 45 | 47 | 49 | 52 | 54 |
| 28 | 16 | 19 | 21 | 24 | 27 | 28 | 29 | 32 | 34 | 35 | 37 | 39 | 41 | 42 | 43 | 45 | 46 | 47 | 48 | 51 | 54 | 56 |
| 29 | 17 | 19 | 22 | 25 | 28 | 29 | 30 | 33 | 35 | 37 | 38 | 40 | 42 | 44 | 45 | 46 | 47 | 48 | 50 | 52 | 55 | 58 |
| 30 | 17 | 20 | 23 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 39 | 42 | 43 | 45 | 47 | 48 | 49 | 50 | 52 | 54 | 57 | 60 |
| 31 | 18 | 21 | 24 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 48 | 49 | 51 | 52 | 54 | 56 | 59 | 62 |
| 32 | 18 | 21 | 24 | 28 | 30 | 32 | 34 | 36 | 39 | 40 | 42 | 44 | 46 | 48 | 50 | 51 | 52 | 53 | 55 | 58 | 61 | 64 |
| 33 | 19 | 22 | 25 | 29 | 31 | 33 | 35 | 38 | 40 | 42 | 43 | 46 | 48 | 50 | 51 | 53 | 54 | 55 | 57 | 60 | 63 | 66 |
| 34 | 20 | 23 | 26 | 30 | 32 | 34 | 36 | 39 | 41 | 43 | 44 | 47 | 49 | 51 | 53 | 54 | 55 | 57 | 59 | 61 | 65 | 68 |
| 35 | 20 | 23 | 27 | 31 | 33 | 35 | 37 | 40 | 42 | 44 | 46 | 49 | 51 | 53 | 54 | 56 | 57 | 58 | 60 | 63 | 67 | 70 |
| 36 | 21 | 24 | 27 | 31 | 34 | 36 | 38 | 41 | 43 | 45 | 47 | 50 | 52 | 54 | 56 | 57 | 59 | 60 | 62 | 65 | 69 | 72 |
| 37 | 21 | 25 | 28 | 32 | 35 | 37 | 39 | 42 | 45 | 47 | 48 | 51 | 54 | 56 | 57 | 59 | 60 | 62 | 64 | 67 | 71 | 74 |
| 38 | 22 | 25 | 29 | 33 | 36 | 38 | 40 | 43 | 46 | 48 | 50 | 53 | 55 | 57 | 59 | 61 | 62 | 63 | 66 | 69 | 73 | 76 |
| 39 | 23 | 26 | 30 | 34 | 37 | 39 | 41 | 44 | 47 | 49 | 51 | 54 | 57 | 59 | 60 | 62 | 64 | 65 | 67 | 70 | 75 | 78 |
| 40 | 23 | 27 | 30 | 35 | 38 | 40 | 42 | 46 | 48 | 50 | 52 | 55 | 58 | 60 | 62 | 64 | 65 | 67 | 69 | 72 | 77 | 80 |
| 41 | 24 | 27 | 31 | 36 | 39 | 41 | 43 | 47 | 49 | 52 | 54 | 57 | 59 | 62 | 64 | 65 | 67 | 68 | 71 | 74 | 78 | 82 |
| 42 | 24 | 28 | 32 | 37 | 40 | 42 | 44 | 48 | 51 | 53 | 55 | 58 | 61 | 63 | 65 | 67 | 68 | 70 | 73 | 76 | 80 | 84 |
| 43 | 25 | 29 | 33 | 38 | 41 | 43 | 45 | 49 | 52 | 54 | 56 | 60 | 62 | 65 | 67 | 68 | 70 | 72 | 74 | 78 | 82 | 86 |
| 44 | 25 | 29 | 34 | 38 | 42 | 44 | 46 | 50 | 53 | 56 | 58 | 61 | 64 | 66 | 68 | 70 | 72 | 73 | 76 | 79 | 84 | 88 |
| 45 | 25 | 30 | 34 | 39 | 43 | 45 | 47 | 51 | 54 | 57 | 59 | 62 | 65 | 68 | 70 | 72 | 73 | 75 | 78 | 81 | 86 | 90 |
| 46 | 27 | 30 | 35 | 40 | 44 | 46 | 48 | 52 | 56 | 58 | 60 | 64 | 67 | 69 | 71 | 73 | 75 | 77 | 79 | 83 | 88 | 92 |
| 47 | 27 | 31 | 36 | 41 | 45 | 47 | 49 | 54 | 57 | 59 | 62 | 65 | 68 | 71 | 73 | 75 | 77 | 78 | 81 | 85 | 90 | 94 |

1) Rounded to the nearest whole number.

**Table 16 — Elongation values [1] on 80 mm corresponding to those obtained on $5{,}65\sqrt{S_0}$ gauge length**

| Actual elongation (%) on $5{,}65\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 80 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 5 | 5 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 14 | 15 | 16 | 17 |
| 11 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 15 | 16 | 16 | 17 | 18 |
| 12 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 17 | 17 | 18 | 19 | 20 |
| 13 | 6 | 7 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 21 | 22 |
| 14 | 7 | 8 | 9 | 10 | 11 | 12 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 22 | 23 |
| 15 | 7 | 8 | 9 | 11 | 12 | 12 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 19 | 20 | 20 | 21 | 21 | 22 | 24 | 25 |
| 16 | 8 | 9 | 10 | 12 | 13 | 13 | 14 | 15 | 16 | 17 | 17 | 18 | 19 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 25 | 27 |
| 17 | 8 | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 | 20 | 21 | 22 | 22 | 23 | 23 | 24 | 25 | 27 | 28 |
| 18 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 26 | 27 | 29 | 30 |
| 19 | 9 | 10 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 24 | 25 | 26 | 26 | 27 | 28 | 30 | 31 |
| 20 | 10 | 11 | 13 | 14 | 16 | 17 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | 28 | 29 | 30 | 32 | 33 |
| 21 | 10 | 12 | 13 | 15 | 17 | 17 | 18 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 33 | 35 |
| 22 | 11 | 12 | 14 | 16 | 17 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 30 | 31 | 33 | 35 | 36 |
| 23 | 11 | 13 | 15 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 30 | 31 | 32 | 33 | 34 | 36 | 38 |
| 24 | 11 | 13 | 15 | 17 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 32 | 33 | 34 | 36 | 38 | 40 |
| 25 | 12 | 14 | 16 | 18 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 32 | 33 | 34 | 34 | 36 | 37 | 40 | 41 |
| 26 | 12 | 14 | 16 | 19 | 20 | 22 | 23 | 25 | 26 | 27 | 28 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | 41 | 43 |
| 27 | 13 | 15 | 17 | 20 | 21 | 22 | 24 | 25 | 27 | 28 | 29 | 31 | 32 | 34 | 35 | 36 | 36 | 37 | 39 | 40 | 43 | 45 |
| 28 | 13 | 15 | 18 | 20 | 22 | 23 | 24 | 26 | 28 | 29 | 30 | 32 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 42 | 44 | 46 |
| 29 | 14 | 16 | 18 | 21 | 23 | 24 | 25 | 27 | 29 | 30 | 31 | 33 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 43 | 46 | 48 |
| 30 | 14 | 16 | 19 | 22 | 24 | 25 | 26 | 28 | 30 | 31 | 33 | 34 | 36 | 37 | 39 | 40 | 41 | 41 | 43 | 45 | 48 | 50 |
| 31 | 15 | 17 | 20 | 22 | 24 | 26 | 27 | 29 | 31 | 32 | 34 | 36 | 37 | 39 | 40 | 41 | 42 | 43 | 44 | 46 | 49 | 51 |
| 32 | 15 | 18 | 20 | 23 | 25 | 27 | 28 | 30 | 32 | 33 | 35 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 48 | 51 | 53 |
| 33 | 16 | 18 | 21 | 24 | 26 | 27 | 29 | 31 | 33 | 35 | 36 | 38 | 40 | 41 | 42 | 44 | 45 | 46 | 47 | 49 | 52 | 55 |
| 34 | 16 | 19 | 21 | 25 | 27 | 28 | 30 | 32 | 34 | 36 | 37 | 39 | 41 | 42 | 44 | 45 | 46 | 47 | 49 | 51 | 54 | 56 |
| 35 | 17 | 19 | 22 | 25 | 28 | 29 | 30 | 33 | 35 | 37 | 38 | 40 | 42 | 44 | 45 | 46 | 47 | 48 | 50 | 52 | 55 | 58 |
| 36 | 17 | 20 | 23 | 26 | 28 | 30 | 31 | 34 | 36 | 38 | 39 | 41 | 43 | 45 | 46 | 48 | 49 | 50 | 52 | 54 | 57 | 60 |
| 37 | 18 | 20 | 23 | 27 | 29 | 31 | 32 | 35 | 37 | 39 | 40 | 43 | 44 | 46 | 47 | 49 | 50 | 51 | 53 | 55 | 59 | 61 |
| 38 | 18 | 21 | 24 | 28 | 30 | 32 | 33 | 36 | 38 | 40 | 41 | 44 | 46 | 47 | 49 | 50 | 51 | 52 | 54 | 57 | 60 | 63 |
| 39 | 19 | 21 | 25 | 28 | 31 | 32 | 34 | 37 | 39 | 41 | 42 | 45 | 47 | 49 | 50 | 51 | 53 | 54 | 56 | 58 | 62 | 65 |
| 40 | 19 | 22 | 25 | 29 | 31 | 33 | 35 | 38 | 40 | 42 | 43 | 46 | 48 | 50 | 51 | 53 | 54 | 55 | 57 | 60 | 63 | 66 |
| 41 | 20 | 23 | 26 | 30 | 32 | 34 | 36 | 39 | 41 | 43 | 44 | 47 | 49 | 51 | 53 | 54 | 55 | 57 | 59 | 61 | 65 | 68 |
| 42 | 20 | 23 | 27 | 30 | 33 | 35 | 37 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 55 | 57 | 58 | 60 | 63 | 67 | 70 |
| 43 | 21 | 24 | 27 | 31 | 34 | 36 | 37 | 41 | 43 | 45 | 47 | 49 | 52 | 54 | 55 | 57 | 58 | 59 | 62 | 64 | 68 | 71 |
| 44 | 21 | 24 | 28 | 32 | 35 | 37 | 38 | 42 | 44 | 46 | 48 | 51 | 53 | 55 | 57 | 58 | 59 | 61 | 63 | 66 | 70 | 73 |
| 45 | 22 | 25 | 28 | 33 | 35 | 37 | 39 | 42 | 45 | 47 | 49 | 52 | 54 | 56 | 58 | 59 | 61 | 62 | 64 | 67 | 71 | 75 |
| 46 | 22 | 25 | 29 | 33 | 36 | 38 | 40 | 43 | 46 | 48 | 50 | 53 | 55 | 57 | 59 | 61 | 62 | 63 | 66 | 69 | 73 | 76 |
| 47 | 22 | 26 | 30 | 34 | 37 | 39 | 41 | 44 | 47 | 49 | 51 | 54 | 56 | 59 | 60 | 62 | 63 | 65 | 67 | 70 | 74 | 78 |

1) Rounded to the nearest whole number.

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**Table 17 — Elongation values[1] on 100 mm corresponding to those obtained on $5{,}65\sqrt{S_0}$ gauge length**

| Actual elongation (%) on $5{,}65\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 100 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 4 | 5 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 13 | 13 | 14 | 14 | 15 |
| 11 | 5 | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 13 | 14 | 14 | 14 | 15 | 16 | 17 |
| 12 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 14 | 14 | 15 | 15 | 16 | 16 | 17 | 18 |
| 13 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 16 | 17 | 18 | 19 | 20 |
| 14 | 6 | 7 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 15 | 15 | 16 | 16 | 17 | 17 | 18 | 18 | 19 | 20 | 21 |
| 15 | 7 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 16 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 22 | 23 |
| 16 | 7 | 8 | 9 | 11 | 12 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 18 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 24 |
| 17 | 7 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 19 | 20 | 21 | 21 | 21 | 22 | 23 | 25 | 26 |
| 18 | 8 | 9 | 10 | 12 | 13 | 14 | 14 | 16 | 16 | 17 | 18 | 19 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 25 | 26 | 27 |
| 19 | 8 | 10 | 11 | 13 | 14 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 23 | 24 | 25 | 26 | 28 | 29 |
| 20 | 9 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 24 | 25 | 25 | 26 | 27 | 29 | 30 |
| 21 | 9 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 25 | 26 | 27 | 27 | 29 | 30 | 32 |
| 22 | 10 | 11 | 13 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 32 | 33 |
| 23 | 10 | 12 | 13 | 15 | 17 | 18 | 18 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 33 | 35 |
| 24 | 10 | 12 | 14 | 16 | 17 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 30 | 31 | 33 | 35 | 36 |
| 25 | 11 | 13 | 14 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 38 |
| 26 | 11 | 13 | 15 | 17 | 19 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 31 | 32 | 33 | 34 | 36 | 38 | 39 |
| 27 | 12 | 14 | 16 | 18 | 19 | 21 | 21 | 23 | 25 | 26 | 27 | 28 | 30 | 31 | 32 | 33 | 33 | 34 | 35 | 37 | 39 | 41 |
| 28 | 12 | 14 | 16 | 19 | 20 | 21 | 22 | 24 | 26 | 27 | 28 | 29 | 31 | 32 | 33 | 34 | 35 | 35 | 37 | 38 | 41 | 42 |
| 29 | 13 | 15 | 17 | 19 | 21 | 22 | 23 | 25 | 27 | 28 | 29 | 30 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 40 | 42 | 44 |
| 30 | 13 | 15 | 17 | 20 | 22 | 23 | 24 | 26 | 27 | 29 | 30 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 41 | 43 | 45 |
| 31 | 14 | 16 | 18 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 41 | 42 | 45 | 47 |
| 32 | 14 | 16 | 18 | 21 | 23 | 24 | 25 | 28 | 29 | 31 | 32 | 34 | 35 | 36 | 38 | 39 | 40 | 40 | 42 | 44 | 46 | 49 |
| 33 | 14 | 17 | 19 | 22 | 24 | 25 | 26 | 28 | 30 | 32 | 33 | 35 | 36 | 38 | 39 | 40 | 41 | 42 | 43 | 45 | 48 | 50 |
| 34 | 15 | 17 | 20 | 23 | 24 | 26 | 27 | 29 | 31 | 33 | 34 | 36 | 37 | 39 | 40 | 41 | 42 | 43 | 44 | 47 | 49 | 52 |
| 35 | 15 | 18 | 20 | 23 | 25 | 27 | 28 | 30 | 32 | 33 | 35 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 48 | 51 | 53 |
| 36 | 16 | 18 | 21 | 24 | 26 | 27 | 29 | 31 | 33 | 34 | 36 | 38 | 40 | 41 | 42 | 43 | 44 | 45 | 47 | 49 | 52 | 55 |
| 37 | 16 | 19 | 21 | 25 | 27 | 28 | 29 | 32 | 34 | 35 | 37 | 39 | 41 | 42 | 43 | 45 | 46 | 47 | 48 | 51 | 54 | 56 |
| 38 | 17 | 19 | 22 | 25 | 27 | 29 | 30 | 33 | 35 | 36 | 38 | 40 | 42 | 43 | 45 | 46 | 47 | 48 | 50 | 52 | 55 | 58 |
| 39 | 17 | 20 | 23 | 26 | 28 | 30 | 31 | 34 | 36 | 37 | 39 | 41 | 43 | 44 | 46 | 47 | 48 | 49 | 51 | 53 | 57 | 59 |
| 40 | 17 | 20 | 23 | 27 | 29 | 30 | 32 | 35 | 37 | 38 | 40 | 42 | 44 | 46 | 47 | 48 | 49 | 50 | 52 | 55 | 58 | 61 |
| 41 | 18 | 21 | 24 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 48 | 49 | 51 | 52 | 54 | 56 | 59 | 62 |
| 42 | 18 | 21 | 24 | 28 | 30 | 32 | 33 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 49 | 51 | 52 | 53 | 55 | 57 | 61 | 64 |
| 43 | 19 | 22 | 25 | 29 | 31 | 33 | 34 | 37 | 39 | 41 | 43 | 45 | 47 | 49 | 51 | 52 | 53 | 54 | 56 | 59 | 62 | 65 |
| 44 | 19 | 22 | 25 | 29 | 32 | 34 | 35 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 53 | 54 | 56 | 58 | 60 | 64 | 67 |
| 45 | 20 | 23 | 26 | 30 | 32 | 34 | 36 | 39 | 41 | 43 | 45 | 47 | 49 | 51 | 53 | 54 | 56 | 57 | 59 | 62 | 65 | 68 |
| 46 | 20 | 23 | 27 | 30 | 33 | 35 | 37 | 40 | 42 | 44 | 46 | 48 | 51 | 52 | 54 | 56 | 57 | 58 | 60 | 63 | 67 | 70 |
| 47 | 21 | 24 | 27 | 31 | 34 | 36 | 37 | 41 | 43 | 45 | 47 | 49 | 52 | 54 | 55 | 57 | 58 | 59 | 62 | 64 | 68 | 71 |

1) Rounded to the nearest whole number.

**Table 18 — Elongation values[1] on 200 mm corresponding to those obtained on $5{,}65\sqrt{S_0}$ gauge length**

| Actual elongation (%) on $5{,}65\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 200 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 11 | 11 |
| 11 | 4 | 4 | 5 | 6 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 10 | 10 | 10 | 11 | 11 | 11 | 12 | 13 |
| 12 | 4 | 5 | 5 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 12 | 12 | 13 | 14 |
| 13 | 4 | 5 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 12 | 12 | 13 | 13 | 14 | 15 |
| 14 | 5 | 5 | 6 | 7 | 8 | 8 | 8 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 12 | 13 | 13 | 13 | 14 | 15 | 15 | 16 |
| 15 | 5 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 14 | 15 | 16 | 16 | 17 |
| 16 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 15 | 16 | 17 | 18 | 18 |
| 17 | 6 | 6 | 7 | 9 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 16 | 17 | 18 | 19 | 20 |
| 18 | 6 | 7 | 8 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 16 | 16 | 16 | 17 | 17 | 18 | 19 | 20 | 21 |
| 19 | 6 | 7 | 8 | 10 | 10 | 11 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 16 | 17 | 17 | 18 | 18 | 19 | 20 | 21 | 22 |
| 20 | 7 | 8 | 9 | 10 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 22 | 23 |
| 21 | 7 | 8 | 9 | 11 | 11 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 17 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 24 |
| 22 | 7 | 8 | 10 | 11 | 12 | 13 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 19 | 20 | 20 | 21 | 21 | 22 | 23 | 24 | 25 |
| 23 | 8 | 9 | 10 | 12 | 13 | 13 | 14 | 15 | 16 | 17 | 17 | 18 | 19 | 20 | 20 | 21 | 22 | 22 | 23 | 24 | 25 | 26 |
| 24 | 8 | 9 | 10 | 12 | 13 | 14 | 14 | 16 | 17 | 17 | 18 | 19 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 25 | 26 | 28 |
| 25 | 8 | 10 | 11 | 13 | 14 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 23 | 24 | 25 | 26 | 27 | 29 |
| 26 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 26 | 27 | 29 | 30 |
| 27 | 9 | 10 | 12 | 14 | 15 | 16 | 16 | 18 | 19 | 20 | 20 | 21 | 22 | 23 | 24 | 25 | 25 | 26 | 27 | 28 | 30 | 31 |
| 28 | 9 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | 28 | 29 | 31 | 32 |
| 29 | 10 | 11 | 13 | 15 | 16 | 17 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 32 | 33 |
| 30 | 10 | 11 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 31 | 33 | 34 |
| 31 | 10 | 12 | 14 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 32 | 34 | 36 |
| 32 | 11 | 12 | 14 | 16 | 17 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 27 | 28 | 28 | 29 | 30 | 31 | 32 | 33 | 35 | 37 |
| 33 | 11 | 13 | 14 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 38 |
| 34 | 11 | 13 | 15 | 17 | 19 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 37 | 39 |
| 35 | 12 | 13 | 15 | 18 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 33 | 33 | 35 | 36 | 38 | 40 |
| 36 | 12 | 14 | 16 | 18 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 32 | 33 | 34 | 34 | 36 | 37 | 40 | 41 |
| 37 | 12 | 14 | 16 | 19 | 20 | 21 | 22 | 24 | 26 | 27 | 28 | 29 | 31 | 32 | 33 | 34 | 35 | 35 | 37 | 38 | 41 | 43 |
| 38 | 13 | 14 | 17 | 19 | 21 | 22 | 23 | 25 | 26 | 28 | 29 | 30 | 32 | 33 | 34 | 35 | 36 | 36 | 38 | 39 | 42 | 44 |
| 39 | 13 | 15 | 17 | 20 | 21 | 23 | 24 | 26 | 27 | 28 | 29 | 31 | 32 | 34 | 35 | 36 | 37 | 37 | 39 | 40 | 43 | 45 |
| 40 | 13 | 15 | 17 | 20 | 22 | 23 | 24 | 26 | 28 | 29 | 30 | 32 | 33 | 35 | 36 | 37 | 37 | 38 | 40 | 41 | 44 | 46 |
| 41 | 14 | 16 | 18 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 33 | 34 | 35 | 37 | 37 | 38 | 39 | 41 | 43 | 45 | 47 |
| 42 | 14 | 16 | 18 | 21 | 23 | 24 | 25 | 27 | 29 | 30 | 32 | 33 | 35 | 36 | 37 | 38 | 39 | 40 | 42 | 44 | 46 | 48 |
| 43 | 14 | 16 | 19 | 22 | 23 | 25 | 26 | 28 | 30 | 31 | 32 | 34 | 36 | 37 | 38 | 39 | 40 | 41 | 43 | 45 | 47 | 49 |
| 44 | 15 | 17 | 19 | 22 | 24 | 25 | 27 | 29 | 30 | 32 | 33 | 35 | 37 | 38 | 39 | 40 | 41 | 42 | 44 | 46 | 48 | 51 |
| 45 | 15 | 17 | 20 | 23 | 25 | 26 | 27 | 29 | 31 | 33 | 34 | 36 | 37 | 39 | 40 | 41 | 42 | 43 | 45 | 47 | 49 | 52 |
| 46 | 15 | 18 | 20 | 23 | 25 | 27 | 28 | 30 | 32 | 33 | 35 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 48 | 51 | 53 |
| 47 | 16 | 18 | 21 | 24 | 26 | 27 | 28 | 31 | 33 | 34 | 35 | 37 | 39 | 41 | 42 | 43 | 44 | 45 | 47 | 49 | 52 | 54 |

1) Rounded to the nearest whole number.

**Table 19 — Elongation values [1] on 50 mm corresponding to those obtained on $4\sqrt{S_0}$ gauge length**

| Actual elongation (%) on $4\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 50 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 5 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 13 | 13 | 13 | 14 | 14 | 14 | 15 | 16 | 17 | 17 |
| 11 | 6 | 6 | 7 | 8 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 17 | 17 | 18 | 19 |
| 12 | 6 | 7 | 8 | 9 | 10 | 10 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 16 | 16 | 17 | 17 | 17 | 18 | 19 | 20 | 21 |
| 13 | 7 | 7 | 9 | 10 | 11 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 16 | 17 | 18 | 18 | 18 | 19 | 20 | 20 | 22 | 23 |
| 14 | 7 | 8 | 9 | 11 | 12 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 18 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 24 |
| 15 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 20 | 20 | 21 | 21 | 22 | 23 | 24 | 25 | 26 |
| 16 | 8 | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 23 | 24 | 25 | 27 | 28 |
| 17 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 19 | 21 | 21 | 22 | 23 | 24 | 24 | 25 | 26 | 27 | 28 | 30 |
| 18 | 9 | 10 | 12 | 14 | 15 | 16 | 16 | 18 | 19 | 20 | 20 | 22 | 23 | 24 | 24 | 25 | 26 | 26 | 27 | 28 | 30 | 31 |
| 19 | 10 | 11 | 13 | 14 | 16 | 17 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | 28 | 29 | 30 | 32 | 33 |
| 20 | 10 | 12 | 13 | 15 | 17 | 17 | 18 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 33 | 35 |
| 21 | 11 | 12 | 14 | 16 | 17 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 30 | 32 | 33 | 35 | 37 |
| 22 | 11 | 13 | 15 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | 33 | 35 | 37 | 38 |
| 23 | 12 | 13 | 15 | 18 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 33 | 33 | 35 | 36 | 38 | 40 |
| 24 | 12 | 14 | 16 | 18 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 38 | 40 | 42 |
| 25 | 13 | 14 | 17 | 19 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 30 | 32 | 33 | 34 | 35 | 35 | 36 | 38 | 39 | 42 | 44 |
| 26 | 13 | 15 | 17 | 20 | 21 | 23 | 24 | 26 | 27 | 29 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 41 | 43 | 45 |
| 27 | 14 | 16 | 18 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 41 | 42 | 45 | 47 |
| 28 | 14 | 16 | 19 | 21 | 23 | 24 | 26 | 28 | 29 | 31 | 32 | 34 | 35 | 37 | 38 | 39 | 40 | 41 | 42 | 44 | 47 | 49 |
| 29 | 15 | 17 | 19 | 22 | 24 | 25 | 27 | 29 | 30 | 32 | 33 | 35 | 37 | 38 | 39 | 40 | 41 | 42 | 44 | 46 | 48 | 50 |
| 30 | 15 | 17 | 20 | 23 | 25 | 26 | 27 | 30 | 31 | 33 | 34 | 36 | 38 | 39 | 40 | 42 | 43 | 43 | 45 | 47 | 50 | 52 |
| 31 | 16 | 18 | 21 | 24 | 26 | 27 | 28 | 31 | 33 | 34 | 35 | 37 | 39 | 41 | 42 | 43 | 44 | 45 | 47 | 49 | 52 | 54 |
| 32 | 16 | 18 | 21 | 24 | 26 | 28 | 29 | 32 | 34 | 35 | 36 | 39 | 40 | 42 | 43 | 44 | 45 | 46 | 48 | 50 | 53 | 56 |
| 33 | 17 | 19 | 22 | 25 | 27 | 29 | 30 | 33 | 35 | 36 | 38 | 40 | 42 | 43 | 45 | 46 | 47 | 48 | 50 | 52 | 55 | 57 |
| 34 | 17 | 20 | 23 | 26 | 28 | 30 | 31 | 34 | 36 | 37 | 39 | 41 | 43 | 44 | 46 | 47 | 48 | 49 | 51 | 53 | 57 | 59 |
| 35 | 18 | 20 | 23 | 27 | 29 | 31 | 32 | 35 | 37 | 38 | 40 | 42 | 44 | 46 | 47 | 48 | 50 | 51 | 53 | 55 | 58 | 61 |
| 36 | 18 | 21 | 24 | 27 | 30 | 31 | 33 | 36 | 38 | 40 | 41 | 43 | 45 | 47 | 49 | 50 | 51 | 52 | 54 | 57 | 60 | 63 |
| 37 | 19 | 21 | 25 | 28 | 31 | 32 | 34 | 37 | 39 | 41 | 42 | 45 | 47 | 48 | 50 | 51 | 52 | 54 | 56 | 58 | 62 | 64 |
| 38 | 19 | 22 | 25 | 29 | 31 | 33 | 35 | 38 | 40 | 42 | 43 | 46 | 48 | 50 | 51 | 53 | 54 | 55 | 57 | 60 | 63 | 66 |
| 39 | 20 | 22 | 26 | 30 | 32 | 34 | 36 | 39 | 41 | 43 | 44 | 47 | 49 | 51 | 53 | 54 | 55 | 56 | 59 | 61 | 65 | 68 |
| 40 | 20 | 23 | 26 | 30 | 33 | 35 | 37 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 55 | 57 | 58 | 60 | 63 | 67 | 70 |
| 41 | 21 | 24 | 27 | 31 | 34 | 36 | 37 | 41 | 43 | 45 | 47 | 49 | 52 | 54 | 55 | 57 | 58 | 59 | 62 | 64 | 68 | 71 |
| 42 | 21 | 24 | 28 | 32 | 35 | 37 | 38 | 42 | 44 | 46 | 48 | 51 | 53 | 55 | 57 | 58 | 60 | 61 | 63 | 66 | 70 | 73 |
| 43 | 22 | 25 | 28 | 33 | 35 | 38 | 39 | 43 | 45 | 47 | 49 | 52 | 54 | 56 | 58 | 60 | 61 | 62 | 65 | 68 | 72 | 75 |
| 44 | 22 | 25 | 29 | 33 | 36 | 38 | 40 | 44 | 46 | 48 | 50 | 53 | 55 | 58 | 59 | 61 | 62 | 64 | 66 | 69 | 73 | 77 |
| 45 | 23 | 26 | 30 | 34 | 37 | 39 | 41 | 45 | 47 | 49 | 51 | 54 | 57 | 59 | 61 | 62 | 64 | 65 | 68 | 71 | 75 | 78 |
| 46 | 23 | 27 | 30 | 35 | 38 | 40 | 42 | 46 | 48 | 51 | 52 | 55 | 58 | 60 | 62 | 64 | 65 | 67 | 69 | 72 | 77 | 80 |
| 47 | 24 | 27 | 31 | 36 | 39 | 41 | 43 | 47 | 49 | 52 | 54 | 57 | 59 | 61 | 63 | 65 | 67 | 68 | 71 | 74 | 78 | 82 |

1) Rounded to the nearest whole number.

Table 20 — Elongation values[1] on 80 mm corresponding to those obtained on $4\sqrt{S_0}$ gauge length

| Actual elongation (%) on $4\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 80 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 4 | 5 | 5 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 9 | 10 | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 13 | 14 | 14 |
| 11 | 5 | 5 | 6 | 7 | 8 | 8 | 8 | 9 | 10 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 13 | 14 | 14 | 15 | 16 |
| 12 | 5 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 13 | 13 | 13 | 14 | 14 | 14 | 15 | 16 | 17 | 17 |
| 13 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 11 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 15 | 15 | 16 | 16 | 17 | 18 | 19 |
| 14 | 6 | 7 | 8 | 9 | 10 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 15 | 15 | 16 | 16 | 16 | 17 | 17 | 18 | 19 | 20 |
| 15 | 6 | 7 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 16 | 17 | 17 | 18 | 18 | 19 | 20 | 21 | 22 |
| 16 | 7 | 8 | 9 | 10 | 11 | 12 | 12 | 13 | 14 | 15 | 15 | 15 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 23 |
| 17 | 7 | 8 | 9 | 11 | 12 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 18 | 18 | 19 | 20 | 20 | 20 | 21 | 22 | 23 | 25 |
| 18 | 7 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 25 | 26 |
| 19 | 8 | 9 | 10 | 12 | 13 | 14 | 14 | 16 | 17 | 17 | 18 | 19 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 25 | 26 | 27 |
| 20 | 8 | 10 | 11 | 13 | 14 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 26 | 28 | 29 |
| 21 | 9 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 23 | 24 | 25 | 25 | 26 | 27 | 29 | 30 |
| 22 | 9 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 25 | 26 | 26 | 27 | 29 | 30 | 32 |
| 23 | 10 | 11 | 13 | 15 | 16 | 17 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | 28 | 29 | 30 | 32 | 33 |
| 24 | 10 | 11 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 33 | 35 |
| 25 | 10 | 12 | 14 | 16 | 17 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 33 | 34 | 36 |
| 26 | 11 | 12 | 14 | 16 | 18 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 31 | 32 | 34 | 36 | 37 |
| 27 | 11 | 13 | 15 | 17 | 18 | 20 | 22 | 22 | 23 | 25 | 25 | 27 | 28 | 29 | 30 | 31 | 32 | 32 | 34 | 35 | 37 | 39 |
| 28 | 12 | 13 | 15 | 18 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 39 | 40 |
| 29 | 12 | 14 | 16 | 18 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 38 | 40 | 42 |
| 30 | 12 | 14 | 16 | 19 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 30 | 31 | 33 | 34 | 34 | 35 | 36 | 37 | 39 | 41 | 43 |
| 31 | 13 | 15 | 17 | 20 | 21 | 22 | 23 | 25 | 27 | 28 | 29 | 31 | 32 | 34 | 35 | 36 | 36 | 37 | 39 | 40 | 43 | 45 |
| 32 | 13 | 15 | 18 | 20 | 22 | 23 | 24 | 26 | 28 | 29 | 30 | 32 | 33 | 35 | 36 | 37 | 38 | 38 | 40 | 42 | 44 | 46 |
| 33 | 14 | 16 | 18 | 21 | 23 | 24 | 25 | 27 | 29 | 30 | 31 | 33 | 34 | 36 | 37 | 38 | 39 | 40 | 41 | 43 | 46 | 48 |
| 34 | 14 | 16 | 19 | 21 | 23 | 25 | 26 | 28 | 30 | 31 | 32 | 34 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 44 | 47 | 49 |
| 35 | 15 | 17 | 19 | 22 | 24 | 25 | 27 | 29 | 30 | 32 | 33 | 35 | 37 | 38 | 39 | 40 | 41 | 42 | 44 | 46 | 48 | 50 |
| 36 | 15 | 17 | 20 | 23 | 25 | 26 | 27 | 30 | 31 | 33 | 34 | 36 | 38 | 39 | 40 | 41 | 42 | 43 | 45 | 47 | 50 | 52 |
| 37 | 15 | 18 | 20 | 23 | 25 | 27 | 28 | 30 | 32 | 34 | 35 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 48 | 51 | 53 |
| 38 | 16 | 18 | 21 | 24 | 26 | 28 | 29 | 31 | 33 | 35 | 36 | 38 | 40 | 41 | 42 | 44 | 45 | 46 | 47 | 49 | 52 | 55 |
| 39 | 16 | 19 | 21 | 25 | 27 | 28 | 30 | 32 | 34 | 35 | 37 | 39 | 41 | 42 | 44 | 45 | 46 | 47 | 49 | 51 | 54 | 56 |
| 40 | 17 | 19 | 22 | 25 | 27 | 29 | 30 | 33 | 35 | 36 | 38 | 40 | 42 | 43 | 45 | 46 | 47 | 48 | 50 | 52 | 55 | 58 |
| 41 | 17 | 20 | 23 | 26 | 28 | 30 | 31 | 34 | 36 | 37 | 39 | 41 | 43 | 44 | 46 | 47 | 48 | 49 | 51 | 53 | 57 | 59 |
| 42 | 17 | 20 | 23 | 26 | 29 | 30 | 32 | 34 | 37 | 38 | 40 | 42 | 44 | 46 | 47 | 48 | 49 | 50 | 52 | 55 | 58 | 61 |
| 43 | 18 | 21 | 24 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 48 | 49 | 51 | 52 | 54 | 56 | 59 | 62 |
| 44 | 18 | 21 | 24 | 28 | 30 | 32 | 33 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 49 | 51 | 52 | 53 | 55 | 57 | 61 | 63 |
| 45 | 19 | 22 | 25 | 28 | 31 | 33 | 34 | 37 | 39 | 41 | 42 | 45 | 47 | 49 | 50 | 52 | 53 | 54 | 56 | 59 | 62 | 65 |
| 46 | 19 | 22 | 25 | 29 | 31 | 33 | 35 | 38 | 40 | 42 | 43 | 46 | 48 | 50 | 51 | 53 | 54 | 55 | 57 | 60 | 63 | 66 |
| 47 | 20 | 22 | 26 | 30 | 32 | 34 | 36 | 39 | 41 | 43 | 44 | 47 | 49 | 51 | 53 | 54 | 55 | 56 | 59 | 61 | 65 | 68 |

1) Rounded to the nearest whole number.

Table 21 — Elongation values[1] on 100 mm corresponding to those obtained on $4\sqrt{S_0}$ gauge length

| Actual elongation (%) on $4\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 100 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 4 | 4 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 12 | 13 | 15 |
| 11 | 4 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 9 | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 13 | 13 | 14 | 15 |
| 12 | 5 | 5 | 6 | 7 | 8 | 8 | 8 | 9 | 10 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 13 | 14 | 14 | 15 | 16 |
| 13 | 5 | 6 | 7 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 14 | 15 | 15 | 16 | 17 |
| 14 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 15 | 16 | 17 | 18 | 18 |
| 15 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 16 | 17 | 18 | 19 | 20 |
| 16 | 6 | 7 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 15 | 15 | 16 | 16 | 17 | 17 | 18 | 18 | 19 | 20 | 21 |
| 17 | 6 | 7 | 9 | 10 | 11 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 22 |
| 18 | 7 | 8 | 9 | 10 | 11 | 12 | 12 | 14 | 14 | 15 | 16 | 16 | 17 | 18 | 18 | 19 | 19 | 20 | 20 | 21 | 23 | 24 |
| 19 | 7 | 8 | 10 | 11 | 12 | 13 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 24 | 25 |
| 20 | 8 | 9 | 10 | 12 | 13 | 13 | 14 | 15 | 16 | 17 | 17 | 18 | 19 | 20 | 20 | 21 | 21 | 22 | 23 | 24 | 25 | 26 |
| 21 | 8 | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 17 | 18 | 19 | 20 | 21 | 21 | 22 | 23 | 23 | 24 | 25 | 26 | 28 |
| 22 | 8 | 10 | 11 | 13 | 14 | 15 | 15 | 17 | 18 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 26 | 28 | 29 |
| 23 | 9 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 24 | 25 | 25 | 26 | 27 | 29 | 30 |
| 24 | 9 | 10 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 25 | 26 | 26 | 27 | 29 | 30 | 32 |
| 25 | 10 | 11 | 13 | 14 | 16 | 17 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | 27 | 28 | 30 | 32 | 33 |
| 26 | 10 | 11 | 13 | 15 | 16 | 17 | 17 | 18 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 31 | 33 | 34 |
| 27 | 10 | 12 | 14 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 32 | 34 | 36 |
| 28 | 11 | 12 | 14 | 16 | 18 | 19 | 19 | 21 | 22 | 23 | 24 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 33 | 35 | 37 |
| 29 | 11 | 13 | 15 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | 33 | 35 | 37 | 38 |
| 30 | 11 | 13 | 15 | 17 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 31 | 32 | 33 | 34 | 36 | 38 | 40 |
| 31 | 12 | 14 | 16 | 18 | 19 | 21 | 21 | 23 | 25 | 26 | 27 | 28 | 30 | 31 | 32 | 33 | 33 | 34 | 35 | 37 | 39 | 41 |
| 32 | 12 | 14 | 16 | 18 | 20 | 21 | 22 | 24 | 25 | 27 | 28 | 29 | 31 | 32 | 33 | 34 | 34 | 35 | 36 | 38 | 40 | 42 |
| 33 | 13 | 14 | 17 | 19 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 30 | 32 | 33 | 34 | 35 | 35 | 36 | 38 | 39 | 42 | 44 |
| 34 | 13 | 15 | 17 | 20 | 21 | 23 | 24 | 26 | 27 | 28 | 29 | 31 | 32 | 34 | 35 | 36 | 37 | 37 | 39 | 40 | 43 | 45 |
| 35 | 13 | 15 | 18 | 20 | 22 | 23 | 24 | 26 | 28 | 29 | 30 | 32 | 33 | 35 | 36 | 37 | 38 | 38 | 40 | 42 | 44 | 46 |
| 36 | 14 | 16 | 18 | 21 | 23 | 24 | 25 | 27 | 29 | 30 | 31 | 33 | 34 | 36 | 37 | 38 | 39 | 40 | 41 | 43 | 45 | 47 |
| 37 | 14 | 16 | 19 | 21 | 23 | 25 | 26 | 28 | 29 | 31 | 32 | 34 | 35 | 37 | 38 | 39 | 40 | 41 | 42 | 44 | 47 | 49 |
| 38 | 14 | 17 | 19 | 22 | 24 | 25 | 26 | 29 | 30 | 32 | 33 | 35 | 36 | 38 | 39 | 40 | 41 | 42 | 43 | 45 | 48 | 50 |
| 39 | 15 | 17 | 20 | 22 | 24 | 26 | 27 | 29 | 31 | 32 | 34 | 36 | 37 | 39 | 40 | 41 | 42 | 43 | 44 | 46 | 49 | 51 |
| 40 | 15 | 17 | 20 | 23 | 25 | 26 | 28 | 30 | 32 | 33 | 35 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 46 | 48 | 50 | 53 |
| 41 | 16 | 18 | 21 | 24 | 26 | 27 | 28 | 31 | 33 | 34 | 35 | 37 | 39 | 41 | 42 | 43 | 44 | 45 | 47 | 49 | 52 | 54 |
| 42 | 16 | 18 | 21 | 24 | 26 | 28 | 29 | 32 | 33 | 35 | 36 | 38 | 40 | 42 | 43 | 44 | 45 | 46 | 48 | 50 | 53 | 55 |
| 43 | 16 | 19 | 22 | 25 | 27 | 28 | 30 | 32 | 34 | 36 | 37 | 39 | 41 | 43 | 44 | 45 | 46 | 47 | 49 | 51 | 54 | 57 |
| 44 | 17 | 19 | 22 | 25 | 28 | 29 | 30 | 33 | 35 | 37 | 38 | 40 | 42 | 44 | 45 | 46 | 47 | 48 | 50 | 52 | 55 | 58 |
| 45 | 17 | 20 | 23 | 26 | 28 | 30 | 31 | 34 | 36 | 37 | 39 | 41 | 43 | 45 | 46 | 47 | 48 | 49 | 51 | 54 | 57 | 59 |
| 46 | 18 | 20 | 23 | 27 | 29 | 30 | 32 | 35 | 37 | 38 | 40 | 42 | 44 | 46 | 47 | 48 | 49 | 51 | 52 | 55 | 58 | 61 |
| 47 | 18 | 21 | 24 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 48 | 49 | 51 | 52 | 54 | 56 | 59 | 62 |

1) Rounded to the nearest whole number.

Table 22 — Elongation values[1] on 200 mm corresponding to those obtained on $4\sqrt{S_0}$ gauge length

| Actual elongation (%) on $4\sqrt{S_0}$ gauge length | Corresponding elongation (%) on 200 mm gauge length if cross-sectional area in square millimetres is: | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 | 1 200 | 1 500 | 2 000 | 2 500 |
| 10 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 10 | 10 |
| 11 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 10 | 11 | 11 |
| 12 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 11 | 11 | 12 |
| 13 | 4 | 4 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 9 | 10 | 10 | 10 | 11 | 11 | 11 | 12 | 12 | 13 |
| 14 | 4 | 5 | 5 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 11 | 11 | 12 | 12 | 13 | 13 | 14 |
| 15 | 4 | 5 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 12 | 12 | 13 | 14 | 14 | 15 |
| 16 | 5 | 5 | 6 | 7 | 8 | 8 | 8 | 9 | 10 | 10 | 10 | 11 | 12 | 12 | 12 | 13 | 13 | 13 | 14 | 14 | 15 | 16 |
| 17 | 5 | 6 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 14 | 15 | 15 | 16 | 17 |
| 18 | 5 | 6 | 7 | 8 | 9 | 9 | 9 | 10 | 11 | 11 | 12 | 12 | 13 | 14 | 14 | 14 | 15 | 15 | 16 | 16 | 17 | 18 |
| 19 | 5 | 6 | 7 | 8 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 15 | 15 | 16 | 16 | 17 | 18 | 19 |
| 20 | 6 | 7 | 8 | 9 | 9 | 10 | 10 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 17 | 17 | 18 | 19 | 20 |
| 21 | 6 | 7 | 8 | 9 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 15 | 15 | 16 | 16 | 17 | 17 | 17 | 18 | 19 | 20 | 21 |
| 22 | 6 | 7 | 8 | 10 | 10 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 16 | 17 | 17 | 18 | 18 | 18 | 19 | 20 | 21 | 22 |
| 23 | 7 | 8 | 9 | 10 | 11 | 12 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 22 | 23 |
| 24 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 17 | 17 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 24 |
| 25 | 7 | 8 | 10 | 11 | 12 | 13 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 7 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 25 | 26 |
| 27 | 8 | 9 | 10 | 12 | 13 | 14 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 26 | 27 |
| 28 | 8 | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 23 | 24 | 25 | 27 | 28 |
| 29 | 8 | 10 | 11 | 13 | 14 | 15 | 15 | 17 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 26 | 28 | 29 |
| 30 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 23 | 24 | 24 | 25 | 26 | 27 | 29 | 30 |
| 31 | 9 | 10 | 12 | 14 | 15 | 16 | 16 | 18 | 19 | 20 | 20 | 21 | 22 | 23 | 24 | 25 | 25 | 26 | 27 | 28 | 30 | 31 |
| 32 | 9 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 25 | 26 | 27 | 28 | 29 | 31 | 32 |
| 33 | 10 | 11 | 13 | 14 | 16 | 17 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | 27 | 28 | 30 | 32 | 33 |
| 34 | 10 | 11 | 13 | 15 | 16 | 17 | 18 | 19 | 21 | 21 | 22 | 24 | 25 | 26 | 26 | 27 | 28 | 28 | 29 | 31 | 32 | 34 |
| 35 | 10 | 12 | 13 | 15 | 17 | 18 | 18 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29 | 30 | 32 | 33 | 35 |
| 36 | 10 | 12 | 14 | 16 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 34 | 36 |
| 37 | 11 | 12 | 14 | 16 | 18 | 19 | 19 | 21 | 22 | 23 | 24 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 33 | 35 | 37 |
| 38 | 11 | 13 | 14 | 17 | 18 | 19 | 20 | 22 | 23 | 24 | 25 | 26 | 28 | 29 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 38 |
| 39 | 11 | 13 | 15 | 17 | 18 | 20 | 20 | 22 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 32 | 34 | 35 | 37 | 39 |
| 40 | 12 | 13 | 15 | 17 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 33 | 33 | 35 | 36 | 38 | 40 |
| 41 | 12 | 14 | 16 | 18 | 19 | 21 | 22 | 23 | 25 | 26 | 27 | 28 | 30 | 31 | 32 | 33 | 33 | 34 | 35 | 37 | 39 | 41 |
| 42 | 12 | 14 | 16 | 18 | 20 | 21 | 22 | 24 | 25 | 26 | 27 | 29 | 30 | 32 | 33 | 33 | 34 | 35 | 36 | 38 | 40 | 42 |
| 43 | 12 | 14 | 16 | 19 | 20 | 22 | 23 | 24 | 26 | 27 | 28 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | 41 | 43 |
| 44 | 13 | 15 | 17 | 19 | 21 | 22 | 23 | 25 | 27 | 28 | 29 | 30 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 40 | 42 | 44 |
| 45 | 13 | 15 | 17 | 20 | 21 | 23 | 24 | 26 | 27 | 28 | 29 | 31 | 33 | 34 | 35 | 36 | 37 | 37 | 39 | 41 | 43 | 45 |
| 46 | 13 | 15 | 18 | 20 | 22 | 23 | 24 | 26 | 28 | 29 | 30 | 32 | 33 | 35 | 36 | 37 | 37 | 38 | 40 | 42 | 44 | 46 |
| 47 | 14 | 16 | 18 | 21 | 22 | 24 | 25 | 27 | 28 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 41 | 42 | 45 | 47 |

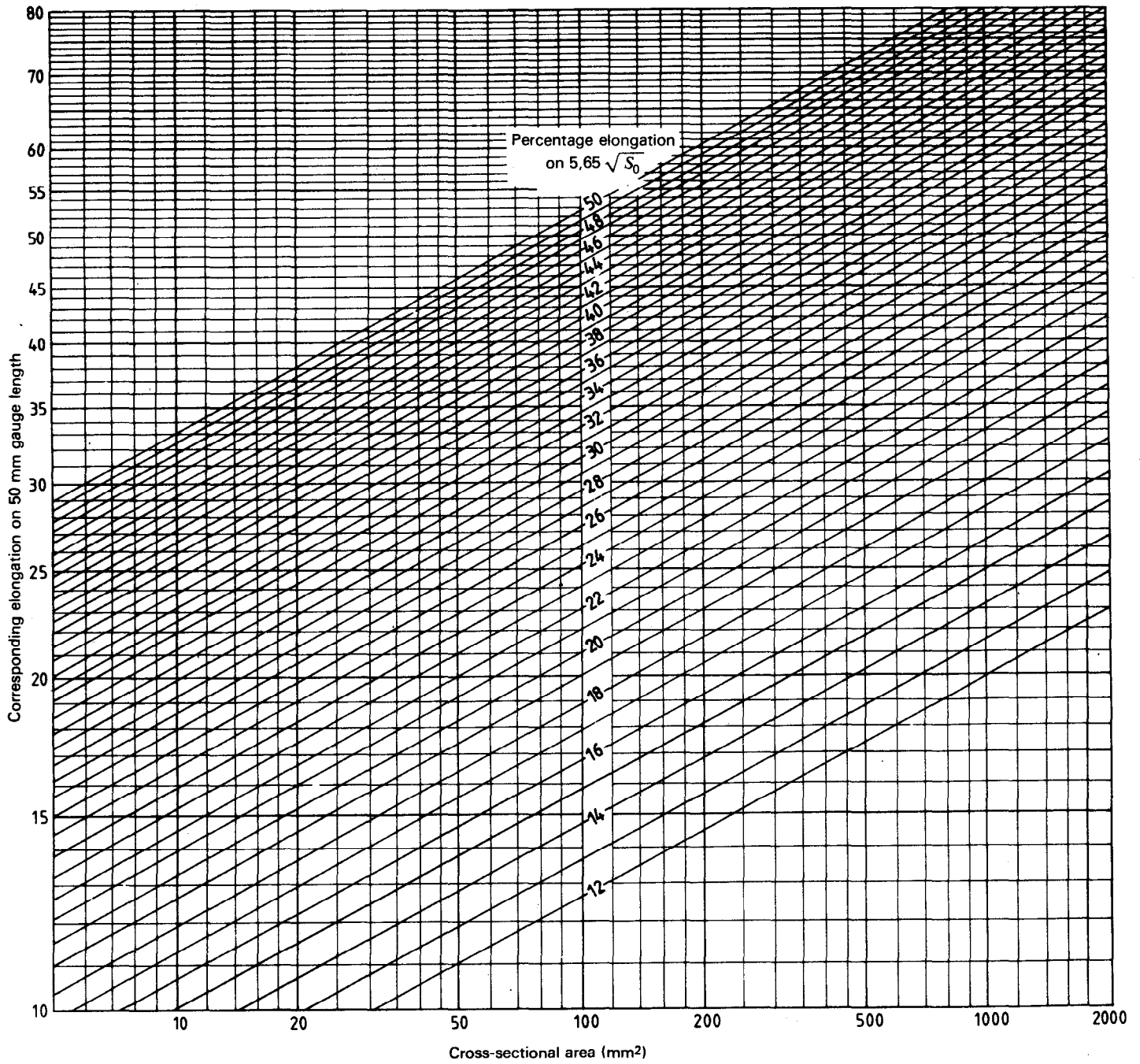1) Rounded to the nearest whole number.

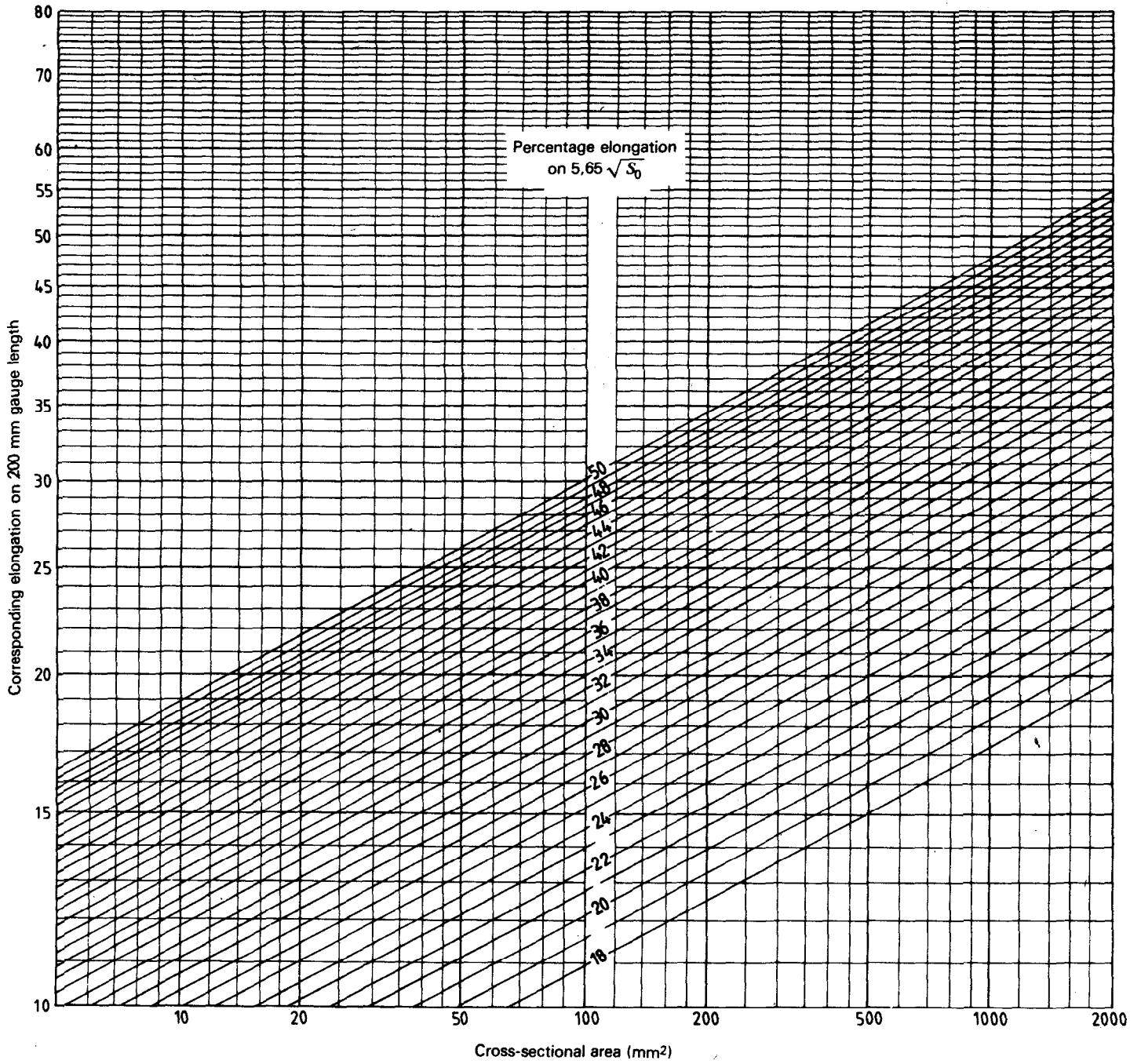Figure 1 — Conversions between $5,65 \sqrt{S_0}$ and 50 mm gauge length

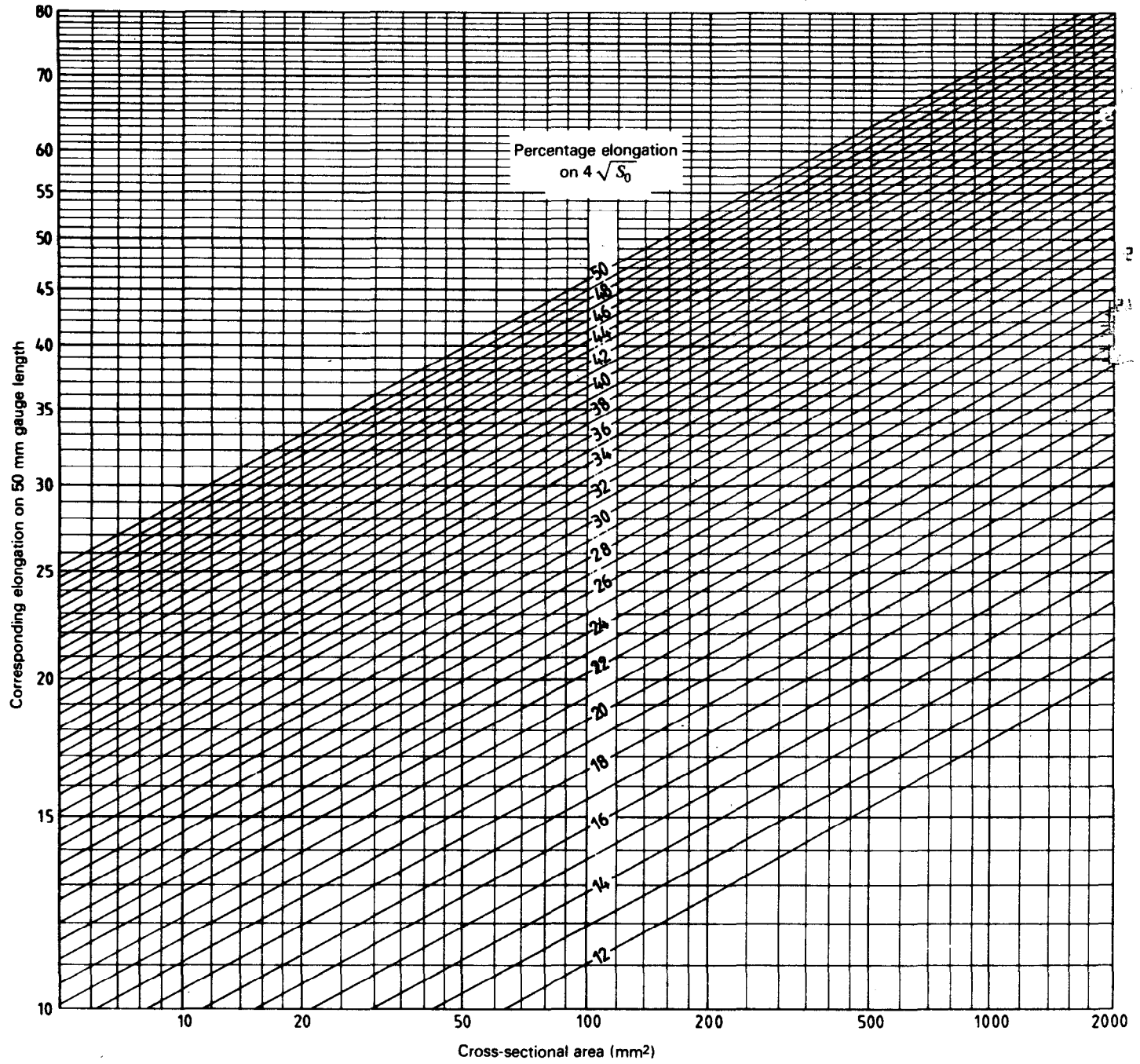Figure 2 — Conversions between 5,65 $\sqrt{S_0}$ and 200 mm gauge length

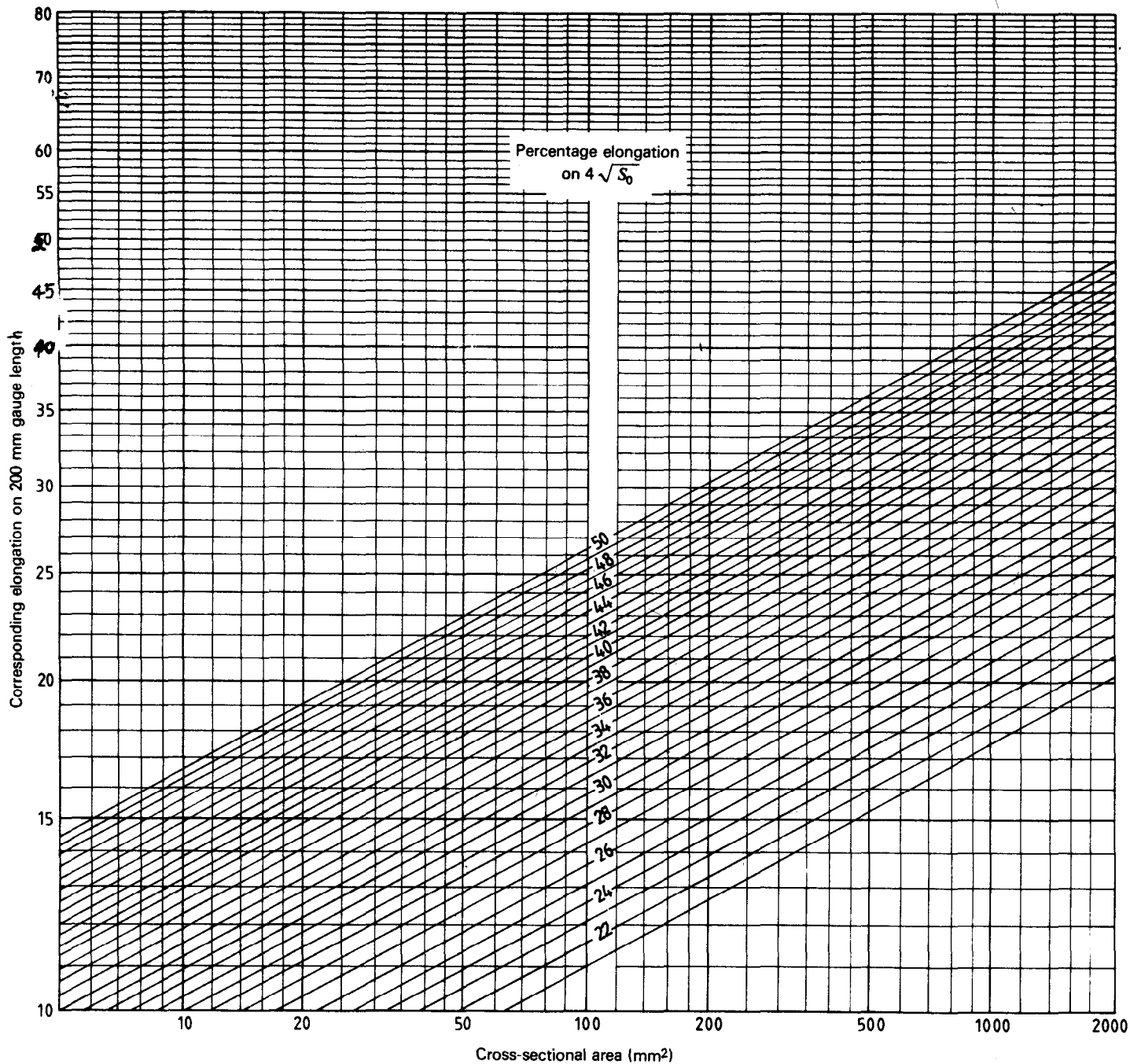Figure 3 — Conversions between $4\sqrt{S_0}$ and 50 mm gauge length

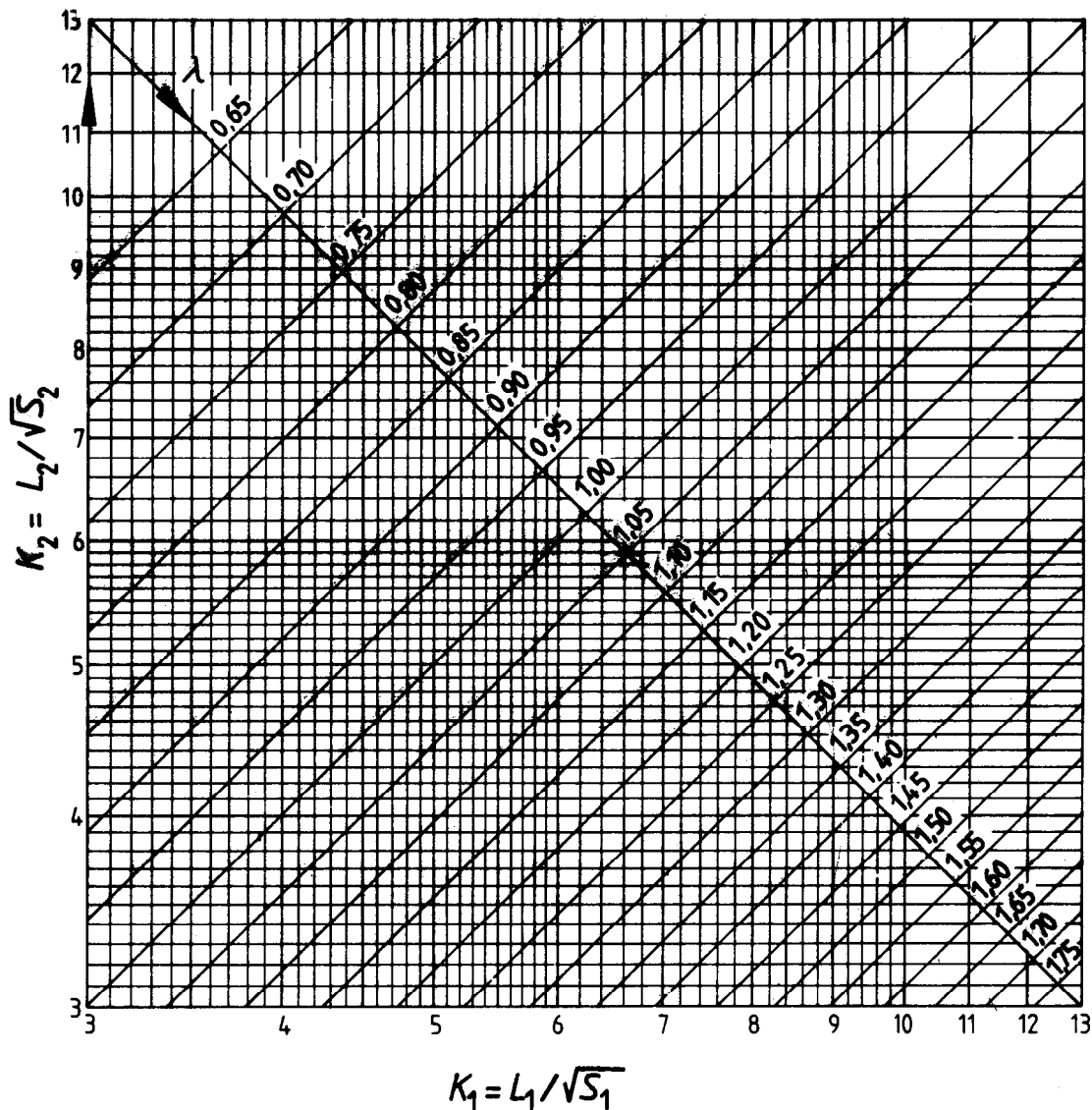Figure 4 — Conversions between $4\sqrt{S_0}$ and 200 mm gauge length

**Figure 5 — Conversions of elongation values**

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