
International Standard



7757

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Wrought copper and copper alloys — Drawn hexagonal bars — Symmetric plus and minus tolerances on width across flats and form tolerances

Cuivre et alliages de cuivre corroyés — Barres étirées de section hexagonale — Tolérances en plus et en moins symétriques sur surplat et tolérances de forme

First edition — 1984-12-01

UDC 669.3-422.6 : 669-124

Ref. No. ISO 7757-1984 (E)

Descriptors : copper, copper alloys, drawn products, metal bars, hexagonal bars, width across flats, form tolerances, dimensions, dimensional tolerances.

Foreword

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International Standard ISO 7757 was prepared by Technical Committee ISO/TC 26, *Copper and copper alloys*.

Wrought copper and copper alloys — Drawn hexagonal bars — Symmetric plus and minus tolerances on width across flats and form tolerances

1 Scope and field of application

This International Standard specifies the symmetric plus and minus tolerances on width across flats in the range from 3 up to and including 60 mm and the form tolerances for wrought copper and copper alloy drawn hexagonal bars.

2 References

ISO 272, *Fasteners — Hexagon products — Widths across flats.*

ISO 1637, *Wrought copper and copper alloys — Solid products supplied in straight lengths — Mechanical properties.*¹⁾

3 Dimensions and tolerances

3.1 Width across flats

Nominal dimensions shall be selected from ISO 272, and the tolerances specified in table 1 applied.

Table 1 — Tolerances on width across flats

Values in millimetres

Width across flats		Tolerance	
>	<	Material group I	Material groups II and III
> 3	6	± 0,07	± 0,11
6	10	± 0,08	± 0,12
10	18	± 0,09	± 0,13
18	30	± 0,10	± 0,14
30	50	± 0,13	± 0,18
50	60	± 0,20	± 0,30

1) Under revision.

3.2 Corner radii

Hexagonal bars may have rounded corners with corner radii according to table 2.

Table 2 — Corner radii

Values in millimetres

Width across flats		Maximum corner radius
>	<	
≥ 3	6	0,6
6	10	0,8
10	18	1,2
18	30	1,8
30	50	2,8
50	60	4,0

3.3 Twist tolerance

The twist tolerance for hexagonal bars with widths across flats in the range from 18 up to and including 60 mm is 3° per metre and 5° per total length, for the nominal lengths up to 3 000 mm; over 3 000 mm nominal lengths, the tolerance shall be agreed.

3.4 Straightness tolerances

3.4.1 Straightness tolerances apply for drawn bars with widths across flats equal to or greater than 10 mm for all tempers, except the annealed.

Straightness tolerances for copper and copper alloy bars, except free-machining materials, are given in table 3.