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# Fasteners

Technical Conditions of Delivery  
Components Made of Non-ferrous Metals

**DIN**  
**267**  
Part 18

Mechanische Verbindungselemente; Technische Lieferbedingungen; Teile aus Nichteisenmetallen  
*As it is current practice in standards published by the International Organization for Standardization (ISO), the comma has been used throughout as a decimal marker.*

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### 1 Scope

This Standard applies to fasteners with a screw thread (mainly bolts and nuts) in the form of finished components made from non-ferrous metals (heavy alloys and light alloys) with

- a metric ISO screw thread according to DIN 13,
- self-tapping screw thread according to DIN 7970,
- a wood screw thread according to DIN 7998
- and other fastening screw threads up to nominal screw thread diameters according to Table 2.

As regards larger nominal screw thread diameters, mutual arrangements must be made in respect of the material selection and of the mechanical properties.

### 2 General

This Standard specifies the technical conditions of delivery for fasteners (mainly bolts and nuts) of certain given dimensions, made from non-ferrous metals. It provides a selection of materials (see Table 1) and stipulates values for the mechanical properties of the fasteners in the form of finished components (see Table 2).

Certain particular properties such as resistance to corrosion, electrical conductivity, and others are not specified in this Standard. They may be obtained from the relevant material standards, in so far they are featured therein.

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**3 Designation and marking**

**3.1 Designation**

The relevant product standards (dimensional standards), in conjunction with the identification symbols for the materials according to Table 1, apply to the designation of fasteners made from non-ferrous metals.

**Example:**

Designation of a hexagon bolt according to DIN 931, with a screw thread  $d = M6$ , length  $l = 30$  mm, of CuNi 1,5 Si (symbol: Cu5):

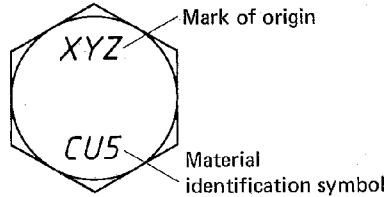
**Hexagon bolt DIN 931 – M 6 x 30 – Cu5**

**3.2 Marking**

**3.2.1 Bolts**

Hexagon bolts and hexagon socket head cap screws made from non-ferrous metals, with metric screw thread from M5 upwards, must be marked on the head with the material identification symbol according to Table 1, and with the mark of origin.

**Example:**



Hexagon bolts and hexagon socket head cap screws made from materials with the identification symbols CU2 and CU3 will only be marked by mutual agreement.

Other bolts are not marked, as a general rule. They may, however, be provided with the marking according to Table 1 by mutual agreement, if the shape of the component concerned permits a marking to be affixed.

**3.2.2 Nuts**

Hexagon nuts made from non-ferrous metals with metric screw threads from M5 upwards must be marked on one of their end faces or on one of their key flats with the identification symbol according to Table 1 and with the mark of origin.

Hexagon nuts made from materials with the identification symbols CU2 or CU3 shall only be marked by mutual agreement.

Other nuts are not marked, as a general rule. They may, however, be provided with the marking according to Table 1 by mutual agreement, if the shape of the component concerned permits a marking to be affixed.

**3.2.3 Other fasteners**

Fasteners other than those according to Sections 3.2.1 and 3.2.2 above shall, as a general rule, not be marked. A marking may, however, be mutually agreed, if the shape of the component concerned permits a marking to be affixed.

**4 Materials**

The selection according to Table 1 below applies to the materials of fasteners made from non-ferrous metals.

Table 1. Materials

Identification symbol	Material Symbol	Number	According to	
			DIN	ISO
CU1	E-Cu57	2.0060	DIN 1787	ISO R 1337
CU2	CuZn37	2.0321	DIN 17 660	ISO 426
CU3	CuZn39Pb3	2.0401	DIN 17 660	ISO 426
CU4	CuSn6	2.1020	DIN 17 662	ISO 427
CU5	CuNi1,5Si	2.0853	DIN 17 666	ISO 546
CU6	CuZn40MnPb	2.0580	DIN 17 660	ISO 426
CU7	CuAl10Ni	2.0966	DIN 17 665	ISO 428
AL1	AlMg3	3.3535	DIN 1725 Teil 1	ISO R 209
AL2	AlMg5	3.3555	DIN 1725 Teil 1	ISO R 209
AL3	AlMgSi1	3.2315	DIN 1725 Teil 1	ISO R 209
AL4	AlCuMg1	3.1325	DIN 1725 Teil 1	ISO R 209
AL5	AlZnMgCu0,5	3.4345	DIN 1725 Teil 1	ISO R 209
AL6	AlZnMgCu1,5	3.4365	DIN 1725 Teil 1	ISO R 209
TI1	Titanium 1)	3.7025	DIN 17 850	—
TI2	TiAl6V4	3.7165	DIN 17 851	—

1) The material identification symbol has yet to be finally decided.

Other materials may be used by mutual agreement. The identification symbols according to Table 1 may, however, only be adopted for such materials on condition that all the properties associated with the identification symbol apply to the finished component.