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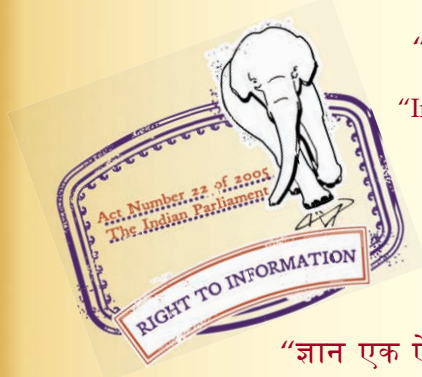
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IS 2376 (1963): Colour code for the identification of copper, copper alloys [MTD 8: Copper and Copper Alloys]



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Indian Standard

COLOUR CODE FOR THE IDENTIFICATION
OF COPPER AND COPPER ALLOYS

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NEW DELHI 110002

Indian Standard

COLOUR CODE FOR THE IDENTIFICATION OF COPPER AND COPPER ALLOYS

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Indian Standard

COLOUR CODE FOR THE IDENTIFICATION OF COPPER AND COPPER ALLOYS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 May 1963, after the draft finalized by the Metal Standards Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 This code has been prepared with a view to establishing a uniform system of colour coding for easy identification of copper and copper alloys. Apart from achieving uniformity in the system of colour coding at present being followed in various organizations in the country, this system would enable easy identification of stocks and in stockyard, thus preventing any mix-up of the different types of the copper and copper alloys.

0.3 The colour coding included in the standard is not mandatory, but shall be adopted when so specifically required by the purchaser.

1. SCOPE

1.1 This standard prescribes a scheme of colour coding for identification of copper and copper alloys on the basis of chemical composition.

2. GENERAL

2.1 Three colour bands are normally used for the identification of the product. The first band normally signifies the alloy group to which the product belongs. The second and third band, wherever applicable in combination with the first band, identify the particular alloy.

3. COLOURS

3.1 Due to fading and dust, all the shades of colours cannot be used and it becomes necessary that as far as possible, only distinct shades of colours should be used. Hence the shades of colours given in Table I shall be used for the purpose of colour coding of the products.

TABLE I DISTINCT SHADES OF COLOURS TO BE USED FOR CODING

COLOUR	SHADE NO. AND ITS DESCRIPTION ACCORDING TO *IS : 5-1961
Black	†Dark Black
Blue	166 French Blue
Green	221 Brilliant Green
Grey	631 Light Grey
Red	537 Signal Red
White	†Cream White
Yellow	356 Golden Yellow

* IS : 5-1962 Colours for Ready Mixed Paints (*Second Revision*).

† Not included in IS : 5-1961.

4. PAINTS

4.1 Appropriate quality of paints conforming to relevant Indian Standards, wherever they exist, shall be used for colour marking.

4.2 It is recommended that the paints used should produce a glossy finish.

5. IDENTIFICATION

5.1 First Band — Normally, the first band signifies the alloy group to which the product belongs and shall be applied as given below:

Pure Copper	Yellow
Brass	Blue
Bronze	Green
Copper Nickel Alloys	Blank

NOTE — In certain cases, only the first band is sufficient to identify the product.

5.2 Second Band — The second band, wherever applicable, in combination with the first band, shall identify the particular product and shall be applied as given in Appendix A.

5.3 Third Band — The third band, wherever applicable, in combination with the first and second band, shall identify the particular product and shall be applied as given in Appendix A.

5.4 The system of colour coding as prescribed in this code and as applicable to copper and copper alloys included in various Indian Standards is given in Appendix A.

6. APPLICATION

6.1 For easy identification, the first colour band and, where applicable, the second colour band shall be painted at one end of the product. The third band, where applicable, shall be painted on the body of the product near one end. The first band shall be wider and the second

and third bands shall be narrower. The wider band shall be approximately equal to twice the narrower band. A gap approximately equal to the width of the narrower band shall be maintained between the successive bands.

6.2 Bars, Rods and Sections — If the material is bundled, colour coding shall be applied on metal tags (see Fig. 1). If required, it may also be painted on the stacking racks or bins.

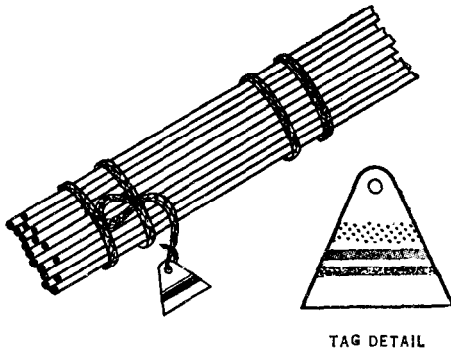


FIG. 1 SMALL RODS IN BUNDLE

6.2.1 In case of tubes, the colour bands shall be painted on the body of the product only (see Fig. 2).

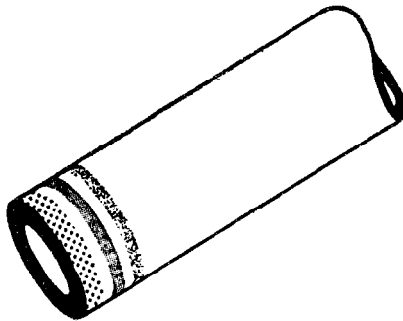


FIG. 2 COLOUR CODING OF TUBE

6.3 Ingots and Slabs — The first colour band, and, where applicable, the second colour band as specified in Appendix A shall be painted at one end (see Fig. 3 and 4). The third colour band, where applicable as given in Appendix A, shall be painted on the top near one end.

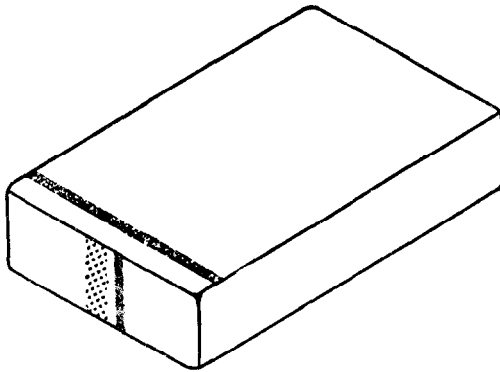


FIG. 3 COLOUR CODING OF SLAB

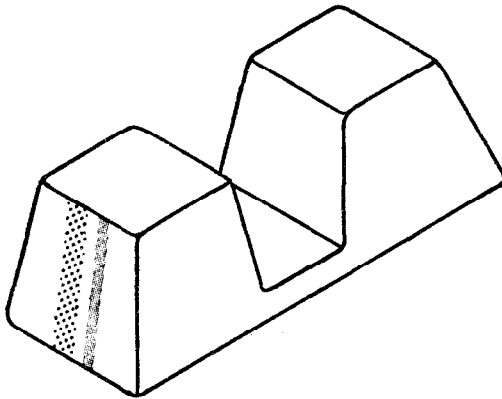


FIG. 4 COLOUR CODING OF INGOT

6.4 Sheets — When stacked one over the other, the first colour band and the second colour band, where applicable, as specified in Appendix A, shall be painted on one end of the stack. The third band, where applicable, as specified in Appendix A, shall be painted diagonally across a corner of the top most sheet (*see* Fig. 5).

6.5 Strips — When stacked one over the other, the first colour band and the second colour band, where applicable, as specified in Appendix A, shall be painted on one end of the stack. The third colour band, if applicable, as specified in Appendix A, shall be painted on the top most

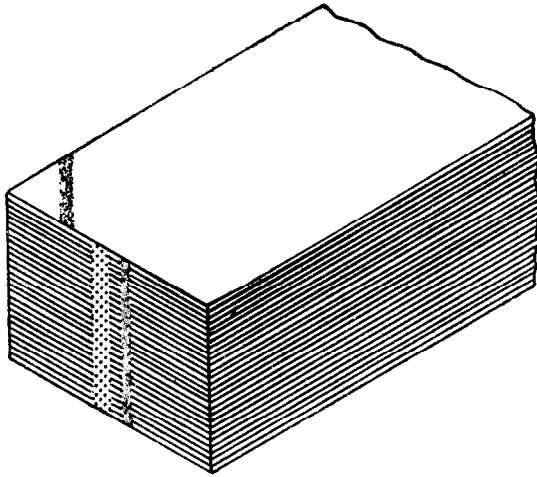


FIG. 5 COLOUR CODING OF A PILE OF SHEETS

strip perpendicular to the length of the strip near one end (*see* Fig. 6). When the strip is in the form of a coil, the first colour band and the second colour band, where applicable, as specified in Appendix A, shall be painted at the face of the coil. The third colour band, if applicable, shall be painted on the body of the coil (*see* Fig. 7).

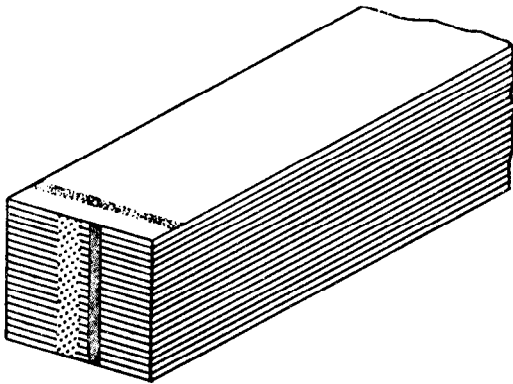


FIG. 6 COLOUR CODING OF A PILE OF STRIPS

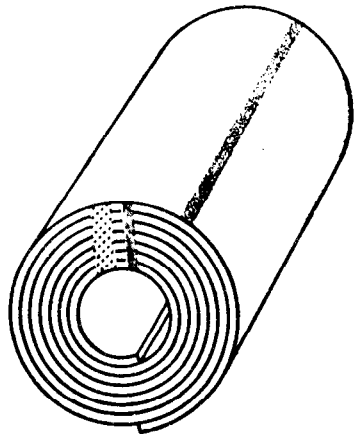


FIG. 7 COLOUR CODING OF STRIP IN COIL FORM

APPENDIX A

(Clauses 5.2, 5.3, 5.4, 6.3, 6.4 and 6.5)

COLOUR CODE FOR COPPER AND COPPER ALLOYS

DESIGNATION	REF TO INDIAN STANDARD	FIRST BAND	SECOND BAND	THIRD BAND
C o p p e r				
CuEHC	191-1961, 613-1954	Yellow	—	—
CuCATH	191-1961, 613-1954	—	*	—
CuFRHC	191-1961, 613-1954	Yellow	Yellow	—
CuFROC-1	191-1961, 613-1954, 1550-1960	Yellow	Green	—
CuFROC-2	191-1961, 613-1954, 1550-1960	Yellow	Grey	—
CuDHP	191-1961, 613-1954	Yellow	White	—
CuDPA	191-1961, 613-1954	Black	—	—
CuATP	191-1961, 288-1960, 613-1954	Yellow	Black	—
B r a s s e s				
CuZn36Sn1	291-1961	Blue	Orange	—
CuZn38Pb	291-1961	Blue	Black	—
CuZn38Sn5	292-1961 (Castings)	Blue	Blue	—
CuZn25Pb4	292-1961 (Castings)	Blue	Green	Blue
CuZn29Pb2	292-1961 (Castings)	Blue	Grey	—
CuZn35Al5Fe2	304-1961	Blue	Red	—
CuZn37Fe2	304-1961	Blue	White	—
CuZn40Fe1	304-1961	Black	Black	—
CuZn39Pb3	319-1961	Blue	—	—
CuZn40Fe1Sn	320-1961	Blue	Black	Blue
CuZn30	407-1961, 410-1961	Grey	—	—
CuZn39	407-1961	Blue	Black	Black
CuZn33	410-1957	Blue	Blue	Black
CuZn37	410-1959	Blue	Blue	Blue
CuZn40	410-1959, 422-1959	Orange	—	—
CuZn40k	422-1959	Blue	Blue	Grey
CuZn39Pb2	531-1959	Red	—	—
CuZn36Pb2	531-1959	Red	Green	—
CuZn34Pb1	531-1959	Red	Green	Green
CuZn38Sn1	1264-1958	Black	—	—
CuZn28As	1545-1960	Blue	Green	Green
CuZn27Sn1As	1545-1960	Blue	Grey	Grey
CuZn21Al2	1545-1960	Blue	Red	Red
B r o n z e s				
CuSn10Zn2	306-1960	Green	Green	—
CuSn8Zn4	306-1960	Green	Green	Green
CuSn7Zn5Pb2	318-1962	Green	Blue	Blue
CuSnZnPb5	318-1962, 1458-1959	Green	—	—
CuPb24Sn5	318-1962	Green	Yellow	Green
CuPb10Sn7	318-1962, 1458-1959	Green	Grey	—

* No colour is specified for this material.

(Continued)

COLOUR CODE FOR COPPER AND COPPER ALLOYS — *Contd*

DESIGNATION	REF TO INDIAN STANDARD	FIRST BAND	SECOND BAND	THIRD BAND
Bronzes — Contd				
CuPb15Sn7	318-1962	Green	Black	—
CuSn5P	1385-1959	Green	White	White
CuSn8P	1385-1959	Green	Black	Green
CuSnPb4P	1385-1959	Green	Green	Black
CuSn7P	1458-1959	Green	Grey	Grey
CuSn6PbZn3	1458-1959	Green	Black	Black
CuSn7Pb15	1458-1959	Green	Black	—

Aluminium Bronzes

CuAl7	1545-1960	White	Blue	—
CuAl10Fe3	805-1961	White	—	—
CuAl10Ni6Fe5	805-1961	White	Green	—
CuAl10Fe1	805-1961	White	Black	—

NOTE — Titles of Indian Standards referred in this appendix are as follows:

- IS:191-1961 Copper (*Revised*)
- IS:288-1960 Copper Rods for Boiler Stay Bolts and Rivets (*Revised*)
- IS:291-1961 Naval Brass Rods and Sections (Suitable for Machining and Forging) (*Revised*)
- IS:292-1961 Brass Ingots and Castings (*Revised*)
- IS:304-1961 High Tensile Brass Ingots and Castings (*Revised*)
- IS:306-1960 Tin Bronze Ingots and Castings (*Revised*)
- IS:318-1962 Loaded Tin Bronze Ingots and Castings (*Revised*)
- IS:319-1961 Free Cutting Brass Rods and Bars for Use in Screw Machines (*Tentative*) (*Under Revision*)
- IS:407-1961 Brass Tubes for General Purposes (*Revised*)
- IS:410-1961 Rolled Brass Plate, Sheet, Strip and Foil (*Revised*)
- IS:422-1959 Brass Sheet and Strip for the Manufacture of Utensils
- IS:531-1959 Leaded Brass Strip for Use in the Manufacture of Parts for Instruments
- IS:613-1954 Copper Bars and Rods for Electrical Purposes
- IS:805-1961 Code of Practice for Use of Steel in Gravity Water Tanks
- IS:1264-1958 Brass Ingots for Gravity Die Castings and Brass Gravity Die Castings (Including Naval Brass)
- IS:1385-1959 Phosphor Bronze Rods and Bars, Sheet and Strip, and Wire
- IS:1458-1959 Railway Bronze Ingots and Castings
- IS:1545-1960 Solid Drawn Copper Alloy Tubes
- IS:1550-1960 Copper Sheet and Strip for the Manufacture of Utensils and for the General Purposes

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