

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 1568 (1970): wire cloth for general purposes [CED 55: Sieves, Sieving and other Sizing Methods]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



IS : 1568 -1970
(Reaffirmed 2008)

Indian Standard
SPECIFICATION FOR
WIRE CLOTH FOR GENERAL PURPOSES
(First Revision)

Sixth Reprint SEPTEMBER 2007
(Incorporating Amendment No.1)

UDC 621.778.57

© Copyright 1975

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR WIRE CLOTH FOR GENERAL PURPOSES (*First Revision*)

Sieves, Sieving and Other Sizing Methods Sectional Committee, BDC 19

Chairman

DR K. N. MATHUR

C/o National Physical Laboratory,
Hillside Road, New Delhi 12

Members

Representing

SHRI S. N. ARORA	Shalimar Wires & Industries Ltd, Uttarpara
SHRI D. N. CHAKRABORTY (<i>Alternate</i>)	
SHRI S. K. BAJORIA	Krishanlal Thirani & Co Ltd, Calcutta
SHRI S. K. GANDHI (<i>Alternate</i>)	
SHRI N. N. BANERJEE	All India Instrument Manufacturers and Dealers Association (Bombay Region)
SHRI R. R. CHAKRABORTY	National Instruments Ltd, Calcutta
DR I. C. DOS M. PAIS CUDDOU	Central Water & Power Commission, New Delhi
SHRI S. V. SURYANARAINA (<i>Alternate</i>)	
SHRI HARCHAND SINGH	The Indian Steel & Wire Products Ltd, Jamshedpur
SHRI R. R. KAPLISH (<i>Alternate</i>)	
DR R. R. HATTIANGADI	The Associated Cement Companies Ltd, Bombay
DR M. K. GHARPUREY (<i>Alternate</i>)	
JOINT DIRECTOR, RESEARCH (F. E.), RDSO	Ministry of Railways
DEPUTY DIRECTOR, RESEARCH (F. E.), RDSO (<i>Alternate</i>)	
SHRI D. S. JOSHI	Hindustan Boilers, Bombay
LT-COL R. V. N. KADAMBI	Ministry of Defence (R & D)
SHRI N. MOHAN RAO (<i>Alternate</i>)	
SHRI CHANDRAKANT L. KHAGRAM	All India Wire Netting Manufacturers' Association, Bombay
SHRI V. KRISHNAMOORTHY	Directorate General of Technical Development
SHRI R. N. MALLICK	Directorate General of Technical Development
SHRI H. M. MARWAH	Hindustan Wire Netting Co Ltd, Bombay
SHRI G. H. MARWAH (<i>Alternate</i>)	
SHRI D. K. MEHTA	Tata-Robins-Fraser Ltd, Jamshedpur
SHRI M. H. RAO (<i>Alternate</i>)	

(*Continued on page 2*)

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

IS : 1568 - 1970

(Continued from page 1)

Members

SHRI PREM PRAKASH
SHRI R. RAJARAMAN
SHRI E. K. RAMACHANDRAN
DR B. RAO
SHRI J. R. SACHDEVA

SHRI K. C. MISRA (*Alternate*)
SHRI K. K. SENGUPTA
SHRI A. K. SEN (*Alternate*)
SHRI P. N. SOOD

SHRI S. R. TALPADE (*Alternate*)
SHRI P. V. SUBBA RAO
SHRI K. C. TOSHNIWAL

SHRI H. C. VERMA

SHRI A. V. A. SHASTRI (*Alternate*)
SHRI D. AJITHA SIMHA,
Director (Civ Engg)

Representing

National Physical Laboratory (CSIR), New Delhi
Central Board of Irrigation & Power, New Delhi
National Test House, Calcutta
The Tata Iron & Steel Co Ltd, Jamshedpur
Defence Production Organization (Ministry of
Defence)

Hindustan Steel Ltd, P. O. Dhansar

All India Instruments Manufacturers and Dealers
Association (Delhi Region)

The Andhra Scientific Co Ltd, Masulipatam
All India Instruments Manufacturers and Dealers
Association (Calcutta Region)

Associated Instrument Manufacturers (India) Private
Ltd, New Delhi

Director General, ISI (*Ex-officio Member*)

Secretary

SHRI VINOD KUMAR
Assistant Director (Civ Engg), ISI

Indian Standard
SPECIFICATION FOR
WIRE CLOTH FOR GENERAL PURPOSES
(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 19 December 1970, after the draft finalized by the Sieves, Sieving and Other Sizing Methods Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 With the increasing use of wire cloth as mosquito-proof screens, fly-proof screens and for many other purposes, manufacture of wire cloth is developing at a rapid rate. There has been, however, wide variation in the quality of material, methods of manufacture and of sizes, which has made wire cloth and screens unsuitable for particular purposes. This standard was published in 1960 in order to give guidance to the wire cloth industry. The Sectional Committee responsible for this standard has now revised it in the light of the experience gained during the last decade. In this revision requirements of chemical constitution of wires has been deleted. Crimping of warp and weft wires has been made optional. No tolerance has been specified for the length as it was not considered necessary. Several permissible diameters of wire have been specified for each aperture size of wire cloth. The method of designating the wire cloth now includes mention of diameter and material of the wire used in the manufacture of the cloth.

0.3 This standard contains clauses 3.2 and 3.3 which call for agreement between the purchaser and the supplier at the time of placing orders. Clause 5.1.1 permits the purchaser to use his option for selection of the length and width of the wire cloth to suit his requirements, clause 4.1 permits the user to specify rectangular apertures and clause 9.1 requires the purchaser to specify the packing.

0.4 In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country. These considerations led the Sectional Committee to derive

IS : 1568 - 1970

assistance from the following publications:

INDIA. MINISTRY OF SUPPLY. Galvanized wire 35-B standard specification for brass or bronze woven wire gauze or cloth (other than the test sieves). 1947.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down the minimum requirements of material, dimensions and construction of woven wire cloth used for general purposes.

1.2 This standard does not cover wire cloth used for test sieves.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 **Woven Wire Cloth** — A cloth produced by weaving wires to form uniform square apertures (see Note under 4.1).

2.2 **Aperture Size** — The width of the clear space between successive wires measured at the centre line of the aperture.

3. WIRE

3.1 The wire used in the manufacture of the cloth shall be well and cleanly drawn free from scale, inequalities, splits, etc, of circular cross-section and of uniform ductility throughout to avoid hard lumps or soft spots in the finished cloth.

3.2 **Material of Wire** — The wire used in the manufacture of the cloth shall be of brass, bronze, mild steel, aluminium alloy or plastics. Specifications for the material and protective covering on the wire, if any, will be agreed upon between the purchaser and the manufacturer.

3.3 **Diameter of Wire** — The recommended diameters of wire for each aperture size is given in Table 1.

NOTE — Deviations in the diameter of wire may be permitted by mutual agreement between the purchaser and the manufacturer provided the diameters so selected fall in the R40 series of preferred numbers in IS : 1076-1967†.

*Rules for rounding off numerical values (revised).

†Preferred numbers (first revision).

TABLE 1 DIMENSIONS OF WIRE CLOTH FOR GENERAL PURPOSES(*Clauses 3.3, 5.1, 5.2.2.1, 5.2.2.2, A-1.2 and A-2.1*)

AVERAGE WIDTH OF APERTURE	MAXIMUM PERMISSIBLE VARIATION IN AVERAGE APERTURE SIZE	MAXIMUM PERMISSIBLE VARIATION IN INDIVIDUAL APERTURE SIZE	NOMINAL DIAMETER OF WIRE
	percent	percent	mm
1.70 mm	± 10	+ 20	0.32, 0.4, 0.56, 0.8
1.40 "			0.25, 0.32, 0.45, 0.63, 0.71
1.18 "			0.25, 0.32, 0.41, 0.45, 0.56, 0.63
1.00 "			0.22, 0.28, 0.36, 0.5, 0.56
850 microns	± 10	+ 30	0.2, 0.25, 0.32, 0.45, 0.50, 0.56
710 "			0.18, 0.25, 0.32, 0.45
600 "			0.16, 0.22, 0.28, 0.4
500 "			0.14, 0.2, 0.25, 0.32, 0.36
425 "			0.14, 0.2, 0.25, 0.28
355 "	± 15	+ 40	0.125, 0.18, 0.22, 0.25
300 "			0.112, 0.16, 0.2, 0.25
250 "			0.1, 0.14, 0.16, 0.2
212 "			0.1, 0.125, 0.14, 0.16, 0.18
180 "			0.08, 0.112, 0.125, 0.14
150 "			0.071, 0.1, 0.112, 0.125

4. CONSTRUCTION

4.1 The cloth shall be regularly woven with a number of equally spaced parallel wires in both warp and weft directions to produce uniform square meshes or openings (*see Note*). The wire cloth shall be properly salvaged by one or more wires in each edge.

NOTE — Rectangular apertures may also be used for which the user will separately specify the dimensions and tolerances.

4.2 Crimping of wires may be done, where necessary, to facilitate construction and to minimize distortion of apertures. '

5. DIMENSIONS AND TOLERANCES

5.1 Dimensions — The dimensions of wire cloth shall be in accordance with Table 1.

5.1.1 The length of the wire cloth shall be 15 m or 30 m and the width 300 mm, 450 mm, 600 mm, 900 mm or 1 200 mm. The length and the width shall be specified by the purchaser.

5.2 Tolerances

5.2.1 Tolerance on Width of the Cloth — A tolerance of ± 5 mm shall be allowed on the width of the cloth as specified in 5.1.1.

5.2.2 Tolerance on Width of Aperture

5.2.2.1 Tolerance on average aperture — The average of the widths of all measured apertures (*see* Appendix A) shall not depart from the nominal aperture by more than appropriate tolerances specified in Table 1.

5.2.2.2 Maximum tolerance — No individual aperture shall exceed the nominal aperture by more than the appropriate tolerances specified in Table 1.

6. DESIGNATION

6.1 The wire cloth shall be designated by its nominal aperture width and diameter of the wire in millimetres or microns as the case may be followed by the material of the wire and the inscription ' wire cloth '.

Example:

- a) 1.40×0.710 mm mild steel wire cloth
- b) 600×400 microns phosphor bronze wire cloth

7. SAMPLING AND INSPECTION

7.1 One roll from every five rolls of wire cloth delivered shall be taken at random and a sample with a minimum length of 600 mm shall be cut from the entire width of the roll for inspection and test.

7.2 The wire cloth selected in accordance with 7.1 shall be inspected and tested for the requirements laid down in this standard.

8. REJECTION

8.1 If any sample fails to comply with the test the whole lot represented by such a sample shall be rejected.

9. PACKING

9.1 The wire cloth shall be wrapped in kraft paper and thereafter packed as desired by the purchaser.

10. MARKING

10.1 Each package shall be clearly marked with the following information:

- a) Wire cloth designation (*see* 6),
- b) Width and length, and
- c) Manufacturer's name or trade-mark.

10.2 The product may also be marked with Standard Mark

10.2.1 The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufactures or producers may be obtained from the Bureau of Indian Standards

APPENDIX A

(Clause 5.2.2.1)

METHOD OF EXAMINATION OF CLOTH

A-1. APERTURE WIDTH

A-1.1 Average Aperture Width — To determine whether the wire cloth complies with the requirement specified in Table 1, the total number of apertures measured in each direction shall be not less than those given in Table 2. The measurements shall be made in ten or fifteen fields (see Table 2) as the case may be, so chosen that no two fields are crossed by the same wire. Diagrams of masks suitable for defining the fields of measurement are illustrated in Fig. 1.

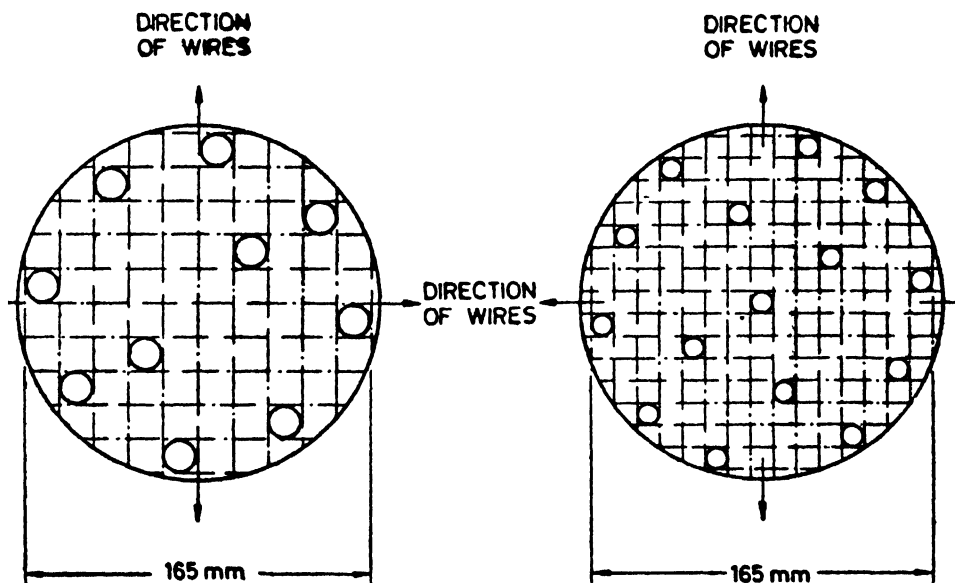


FIG. 1 MASKS FOR DEFINING THE FIELDS OF MEASUREMENT

A-1.2 Measurement for Determination of Maximum Variation in Individual Aperture — To determine whether the wire cloth complies with the requirements specified in Table 1, it shall be examined across two diameters, one across the warp and the other across the weft.

A-2. WIRE DIAMETER

A-2.1 To determine whether the wire diameter complies with the requirement specified in Table 1, ten consecutive wires shall be measured in each direction in each field.

TABLE 2 NUMBER OF APERTURES TO BE MEASURED

(Clause A-1.1)

NOMINAL APERTURE OF WIRE CLOTH	No. OF FIELDS	MINIMUM NUMBER OF CONSECUTIVE APERTURE TO BE MEASURED IN EACH DIRECTION	
		In Each Field	In All Fields
(1)	(2)	(3)	(4)
1.70 mm	10	5	50
1.40 "	10	6	60
1.18 "	10	8	80
1.00 "	10	9	90
850 micron	10	10	100
710 "	10	12	120
600 "	10	15	150
500 "	10	15	150
425 "	10	20	200
355 "	10	25	250
300 "	10	30	300
250 "	10	30	300
212 "	15	20	300
180 "	15	20	300
150 "	15	25	375

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones: 23230131, 23233375, 23239402

Fax: 91+011 23239399, 23239382

E-Mail: info@bis.org.in

website: http://www.bis.org.in

Central Laboratory:

Plot No. 20/9, Site IV, Sahibabad Industrial Area, SAHIBABAD 201010

Telephone

277 0032

Regional Offices:

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

2323 7617

*Eastern : 1/14 CIT Scheme VII M, V.I.P. Road, Kankurgachi, KOLKATA 700054

2337 8662

Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160022

260 9285

Southern : C.I.T. Campus, IV Cross Road, CHENNAI 600113

2254 1984

†Western: Manakalaya, E9, MIDC, Behind Marol Telephone Exchange,
Andheri (East), MUMBAI 400093

2832 9295

Branch Offices:

'Pushpak', Nurmohamed Shaikh Marg, Khanpur, AHMEDABAD 380001

560 1348

Peenya Industrial Area, 1st Stage, Bangalore-Tumkur Road, BANGALORE

839 4955

Commercial-cum-Office Complex, Opp. Dushera Maidan, Arera Colony,
Bittan Market, BHOPAL 462016

242 3452

62-63, Ganga Nagar, Unit VI, BHUBANESHWAR 751001

240 3139

5th Floor, Kovai Towers, 44 Bala Sundaram Road, COIMBATORE 641018

221 0141

SCO 21, Sector 12, Faridabad 121007

229 2175

Savitri Complex, 116 G.T. Road, GHAZIABAD 201001

286 1498

53/5 Ward No. 29, R.G. Barua Road, 5th By-lane, Apurba Sinha Path,
GUWAHATI 781003

245 6508

5-8-56C, L.N. Gupta Marg, Nampally Station Road, HYDERABAD 500001

2320 1084

Prithvi Raj Road, Opposite Bharat Overseas Bank, C-Scheme, JAIPUR 302001

222 3282

11/418 B, Sarvodaya Nagar, KANPUR 208005

223 3012

Sethi Bhawan, 2nd Floor, Behind Leela Cinema, Naval Kishore Road,
LUCKNOW 226001

261 8923

H. No. 15, Sector-3, PARWANOO, Distt. Solan (H.P.) 173220

235 436

Plot No A-20-21, Institutional Area, Sector 62, Goutam Budh Nagar, NOIDA 201307

240 2206

Patliputra Industrial Estate, PATNA 800013

226 2808

Plot Nos. 657-660, Market Yard, Gultkdi, PUNE 411037

2427 4804

"Sahajanand House" 3rd Floor, Bhaktinagar Circle, 80 Feet Road,
RAJKOT 360002

237 8251

T.C. No. 2/275 (1 & 2), Near Food Corporation of India, Kesavadasapuram-Ulloor Road,
Kesavadasapuram, THIRUVANANTHAPURAM 695004

255 7914

1st Floor, Udyog Bhavan, VUDA, Siripuram Junction, VISHAKHAPATNAM-03

271 2833

*Sales Office is at 5 Chowringhee Approach, P.O. Princep Street, KOLKATA 700072

2355 3243

†Sales Office (WRO) Plot No. E-9, MIDC, Rd No. 8, Behind Telephone Exchange,
Andheri (East), Mumbai-400 0093

2832 9295