भारतीय मानक **IS 13598 : 2024**

Indian Standard

वस्त्रादि — उच्च घनत्व पॉलीथीन मोनोफिलामेंट के नेवाड़ — विशिष्टि

(पहला पुनरीक्षण)

Textiles — High Density Polyethylene Monofilament Newar — Specification

(First Revision)

ICS 59.080.50

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Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee, TXD 39

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee had been approved by the Textile Division Council.

High density polyethylene monofilament newar is commonly used for weaving bed bases, providing strong and flexible support. This type of webbing is also utilized in the production of furniture, charpoys, and cots, ensuring stability through its firm yet resilient structure.

This standard was first published in 1992. This revision has been brought out in the light of experience gained since its publication and to incorporate the following major changes:

a) Title of the standard has been modified;
b) BIS certification marking clause has been modified; and
c) References to Indian Standard given in Annex A has been updated.

The composition of the Committee responsible for the formulation of this standard is given in Annex C.

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 : 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — HIGH DENSITY POLYETHYLENE MONOFILAMENT NEWAR — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements for three grades for high density polyethylene (HDPE) monofilament newar.

2 REFERENCES

The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards.

3 MATERIAL

The newar shall be made out of high density continuous monofilament polyethylene yarn having a relative density of 0.95 to 0.96.

4 REQUIREMENTS

4.1 The newar shall conform to the physical requirements as specified in Table 1.

4.2 The dyed newar shall also conform to the requirements as given in Table 2.

4.3 Creep

The average creep of the five samples when tested according to the methods given in Annex B shall not be more than 5.5 percent.

5 PACKING

The newar shall be supplied in rolls and packed as per the contract or order.

6 MARKING

6.1 Bach roll of newar shall be suitably marked with the following information:

a) Name of the material and grade;
b) Length (m), width (mm);
c) Indication of the source of manufacture; and
d) Any other information as required by the law in force.

6.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

7 SAMPLING AND CRITERIA FOR CONFORMITY

7.1 Lot

The rolls of the same width and grade delivered to a buyer against one dispatch note shall constitute a lot.

7.2 The sample rolls shall be selected at random as per IS 4905 as given in Table 3.

7.3 Criteria for Conformity

Sl No.	*Characteristic*	*Number of Specimens*	*Criteria for Conformity*
(1)	(2)	(3)	(4)
i)	Length, width, and mass	As per col (3) of Table 3.	Number of defective rolls not to exceed values given under col (4) of Table 3.

Sl No.	*Characteristic*	*Number of Specimens*	*Criteria for Conformity*
(1)	(2)	(3)	(4)
ii)	Breaking load, colour fastness and creep	Take test specimen randomly [as given in col (5) of Table 3] from sample rolls [as in col (3) of Table 3] for testing the various requirements.	None of the test specimen shall fail in any requirements.

Table 1 Physical Requirements of HDPE Monofilament Newar

(*Clause* 4.1)

Sl No.	**Grade**	**Length** m	**Width** mm	**Mass** g/m^2 *Min*	**Breaking Load** N/cm width *Min*
(1)	(2)	(3)	(4)	(5)	(6)
i)	I	As agreed	As agreed or	350	600
ii)	II	or	declared	300	500
iii)	III	declared		250	400
Tolerance		Not less than declared	+ 2 − 0	—	—
Method of Test		IS 1954		IS 1964	IS 1969 (Part 1)

Table 2 Colour Fastness Requirements of Dyed HDPE Monofilament Newar

(*Clause* 4.2)

Sl No.	**Characteristic(s)**	**Requirements**	**Method of Test, Ref to**
(1)	(2)	(3)	(4)
i)	Colour fastness to		
	a) Light	3 or better	IS/ISO 105-B02 : 2014
	b) Water		
	1) Changing in colour	4 or better	
	2) Staining on adjacent fabric	4 or better	IS/ISO 105-E01 : 2013
	c) Rubbing	4 or better	IS/ISO 105-X12 : 2016

Table 3 Sample Size and Criteria for Conformity

(*Clauses* 7.2 *and* 7.3)

Sl No.	**Lot Size (Number of Rolls)**	**Sample Size**	**Permissible Number of Defective Rolls**	**Sub-Sample Size**
(1)	(2)	(3)	(4)	(5)
i)	Up to 100	8	0	2
ii)	101 to 300	13	1	3
iii)	301 to 500	20	2	4
iv)	501 to 1 000	32	3	5
v)	1 001 and above	50	5	7

ANNEX A

(*Foreword* and *Clause* 2)

LIST OF REFERRED STANDARDS

IS No.	*Title*	*IS No.*	*Title*
IS/ISO 105-B02 : 2014	Textiles — Tests for colour fastness: Part B02 Colour fastness to artificial light: Xenon arc fading lamp test	IS 1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics (*second revision*)
IS/ISO 105-E01 : 2013	Textiles — Tests for colour fastness: Part E01 Colour Fastness to Water (*first revision*)	IS 1969 (Part 1) : 2018	Textiles — Tensile properties of fabrics: Part 1 Determination of maximum force and elongation at maximum force using the strip method (*fourth revision*)
IS/ISO 105-X12 : 2016	Textiles — Tests for colour fastness: Part X12 Colour fastness to rubbing (*first revision*)	IS 4905 : 2015	Random sampling and randomization procedures (*first revision*)
IS 1954 : 2024	Textiles — Fabrics — Determination of width and length (*third revision*)		

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ANNEX B

(*Clause* 4.3)

METHOD FOR DETERMINATION OF CREEP

B-1 PROCEDURE

B-1.1 Take a sample of newar of length 1.2 m.

B-l.2 Draw two lines on the sample, transverse to the warp direction and (100.0 ± 0.1) cm apart. When marking these lines, the newar shall be laid on a smooth flat surface and the minimum necessary tension should be applied to it to keep it straight.

B-1.3 Suspend the webbing vertically from a rigidly fixed clamp.

B-1.4 Fix a second clamp to the free end of the specimen and add weight to this clamp slowly so that the total weight suspended by the newar is 10 kg. The distance between the two clamps, that is the distance between two transverse lines, shall be more than 1 m [say this length is (100 ± l) cm].

B-1.5 Measure the distance (L) between the transverse lines marked on it after the tension has been applied to the specimen for 24 h.

B-1.6 The value [L - (100 + 1)] is the percentage creep for the specimen.

ANNEX C

(*Foreword*)

COMMITTEE COMPOSITION

Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee, TXD 39

Organization	*Representative*(*s*)
Additional Controller CQA (General Stores), DGQA, Ministry of Defence, Kanpur	SHRI A. CHOWDHURY **(*Chairperson*)**
Federation of Indian Chambers of Commerce and Industry, New Delhi	SHRI ANU HANDA
ICAR - Central Institute for Research on Cotton Technology, Mumbai	DR P. JAGAJANANTHA DR T. SENTHILKUMAR (*Alternate*)
Indian Technical Textile Association, Mumbai	DR ANUP RAKSHIT SHRI VIKRAM JAIN (*Alternate*)
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Motilal Dulichand Pvt Ltd, Kanpur	SHRI SHAILENDRA NATH MISRA SHRI SUDHIR SHIVHARE *(Alternate*)
National Textile Corporation, New Delhi	SHRI R. K. YADAV
Office of Textiles Commissioner, Mumbai	SHRI V. K. KOHLI SHRI HUMAYUN K. (*Alternate*)
Ordnance Parachute Factory, Kanpur	SHRI V. M. BAGADE SHRI S. KONDAIAH (*Alternate*)
SGS Limited, Gurugram	MS ANITHA JEYARAJ SHRI GAURAV SARASWAT (*Alternate*)
Shipra International, Kanpur	SHRI ABHISHEK KUMAR AGRAWAL
Sky Industries Ltd, Navi Mumbai	SHRI KAPIL MEHROTRA SHRI MICHAEL (*Alternate*)
S L Banthia Textiles Industries Pvt Ltd, Surat	SHRI SANTOSH KUMAR BANTHIA
Synthetic and Art Silk Mills Research Association, Mumbai	SHRI SANJAY SAINI SHRI PREMNATH SURWASE (*Alternate*)
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Member Secretary
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SCIENTIST 'B'/ASISTANT DIRECTOR
(TEXTILES), BIS

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Amendments Issued Since Publication

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