



**उत्पाद मैनुअल**  
**Fibre Ropes - Polypropylene Split Film, Monofilament and Multifilament (PP2) and Polypropylene High-Tenacity Multifilament (PP3) — 3-, 4-, 8- and 12-Strand Ropes**

IS 5175:2022/ISO 1346:2021

के अनुसार

**PRODUCT MANUAL**

**FOR Fibre Ropes - Polypropylene Split Film, Monofilament and Multifilament (PP2) and Polypropylene High-Tenacity Multifilament (PP3) — 3-, 4-, 8- and 12-Strand Ropes ACCORDING TO IS 5175:2022/ISO 1346:2021**

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम 2018 की योजना- I के तहत प्रमाणन के संचालन में अभ्यास और पारदर्शिता के संचालन में पारदर्शिता सुनिश्चित करने के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन लाइसेंस/प्रमाणपत्र प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

*This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.*

1.	उत्पाद Product	:	IS 5175:2022/ISO 1346:2021
	शीर्षक Title	:	Fibre Ropes - Polypropylene Split Film, Monofilament and Multifilament (PP2) and Polypropylene High-Tenacity Multifilament (PP3) — 3-, 4-, 8- and 12-Strand Ropes
	संशोधनों की संख्या No. of amendments	:	00
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	No specific requirement
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer Annex - A
c)	नमूने का आकार Sample Size	:	10 meter

3.	परीक्षण उपकरणों की सूची <b>List of Test Equipment</b>	:	Please refer Annex - B
4.	निरीक्षण और परीक्षण की स्कीम <b>Scheme of Inspection and Testing</b>	:	Please refer Annex - C
5.	एक दिन में संभावित परीक्षण <b>Possible tests in a day</b>		
	All tests (provided samples are already conditioned)		
6.	<b>लाइसेंस का दायरा/Scope of the Licence:</b>		
	“Licence is granted to use Standard Mark as per IS 5175:2022/ISO 1346:2021 with the following scope:		
	<b>Name of the product</b>	Fibre Ropes - Polypropylene Split Film, Monofilament and Multifilament (PP2) and Polypropylene High-Tenacity Multifilament (PP3) — 3-, 4-, 8- and 12-Strand Ropes	
	<b>Type</b>	A/B/L/T	
	<b>Size</b>	Reference number (approximate diameter in mm)	
	<b>Material</b>	Split/Mono/Multi PP2/ High tenacity Multi PP3 Unspliced ropes/ropes with eye spliced terminations	

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

## ANNEX-A

## GROUPING GUIDELINES

For the purpose of Grant of Licence/Change in Scope of Licence, the fibre ropes are classified according to the reference number (size) and the tolerances on linear density into the following groups

Group	Type	Material	Reference Numbers
Group I	Type A/B	PP2 (Split/Mono/Multi filament) and PP3 (High tenacity Multifilament)	From 4 up to and including 10
Group II	Type A/B	-do-	From 12 up to and including 36
Group III	Type A/B	-do-	From 40 up to and including 160
Group IV	Type L/T	-do-	From 12 up to and including 36
Group V	Type L/T	-do-	From 40 up to and including 160

The manufacturer shall declare the materials i.e. PP2 and/or PP3 intended to be used to make ropes as per this standard. From **each group**, sample of the **highest size (reference number)** of **each type and of each material** may be tested to cover the range of sizes of that type and that material within that group.

However, either unspliced or eye-spliced sample may be drawn for covering both unspliced and eye-spliced ropes in scope of licence.

However, it shall be ensured that the manufacturer has got complete manufacturing as well as testing facilities for the sizes required to be covered in the scope of the licence.

During the operation of licences, samples of all varieties covered in the licence shall be drawn for testing in rotation, to the extent possible.

**ANNEX – B****LIST OF TEST EQUIPMENTS**

**Major test equipment required to test as per the Indian Standard**

<b>Sl. No.</b>	<b>Tests Used In With Clause Reference</b>	<b>Test Equipment/Chemical</b>
<b>1</b>	Diameter, Clause 6, (Table 1,2,3) Pitch or length of lay (Table 4, 5)	Vernier Caliper (LC-0.1 mm, Range- 100 mm)
<b>2</b>	Linear Density, Clause 6 (Table 1,2,3), Pitch or length of lay (Table 4, 5)	Measuring Scale, measuring tape (LC – 1 mm, Range)
<b>3</b>	Linear Density, Clause 6 (Table 1,2,3)	Weighing Balance (capable of weighing to an accuracy of 1%)
<b>4</b>	Minimum Breaking Force (Table 1,2,3)	Constant rate of traverse type Tensile Testing Machine
<b>5</b>	Linear Density, Clause 6 (Table 1,2,3)	Tension Device
<b>6</b>	Linear Density, Clause 6 (Table 1,2,3)	Thermo Hygrometer
<b>7</b>	Linear Density, Clause 6 (Table 1,2,3)	Air conditioner

**The list above is indicative only and may not be considered as exhaustive**

**ANNEX B****SCHEME OF INSPECTION AND TESTING**

1. **LABORATORY-** A laboratory shall be maintained, which shall be suitably equipped (as given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the method given in the specification.

1.1 The manufacturer shall prepare **and implement a** calibration plan for the test equipment.

2. **TEST RECORD-** The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. **PACKING AND MARKING** - The Standard Mark as given in the Schedule of the shall be incorporated on the labels attached at both ends of each coil of polypropylene rope provided always that the rope in each coil to which this mark is applied conform to every requirement of the specification. The standard mark shall also be marked on each package containing such ropes.

Marking, packaging, labeling, invoicing and delivery length shall be in accordance with ISO 9554. In addition, the following details shall be marked on labels affixed to each coil.

- i) Licence No. (CM/L... ..)
- ii) BIS website details: [www.bis.gov.in](http://www.bis.gov.in)

4. **CONTROL UNIT-** For the purpose of this scheme, The total quantity of rope of one type and one reference number manufactured from one type of material in a day from same batch of yarn shall constitute one control unit.

5. **LEVELS OF CONTROL** :- The tests as indicate in Table 1 and at the levels of controls in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark.

6. **REJECTION** - Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act,2016.

**TABLE1**  
**LEVELS OF CONTROL**

(1)			(2)	(3)		
Test Details			Test equipment requirement R: required (or)S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods Clause Reference		No. of Sample	Frequency	Remarks
5.2	Construction, manufacture, lay, labeling packaging, invoicing and Delivery length		IS/ISO 9554:2019	R	All ropes	Each control unit
6.0	Linear Density		IS 7071:2021	R	Three ropes	Each control unit
6.0	Minimum breaking strength		IS 7071:2021	R	Three ropes	Each control unit

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.