

**PRODUCT MANUAL FOR
Braided Nylon Rope for Mountaineering Purposes
As per IS 6590:1972**

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.	Product	:	IS 6590 : 1972
	Title	:	Braided Nylon Rope for Mountaineering Purposes
	No. of amendments	:	0
2.	Sampling Guidelines		
a)	Raw material	:	Nylon Yarn – Test certificate from supplier shall be obtained for minimum tenacity as per clause 3.1.1
b)	Grouping Guidelines	:	Nil. The standard covers only 10mm Rope
c)	Sample Size	:	30m
3.	List of Test Equipment	:	Please refer Annex - A
4.	Scheme of Inspection and Testing	:	Please refer Annex - B
5.	Possible tests in a day	:	All tests, provided samples conditioned as per Annex A-1 of IS 6590 are available
6.	Scope of the Licence : Licence is granted to use Standard Mark as per IS 6590:1972 with the following scope		
	Name of the product	Braided Nylon Rope for Mountaineering Purposes	

Annex - A
List of Test Equipment

Sr. No.	Tests used in with Clause Reference	Test Equipment
1	4.2- Slackness of Sheath	Measuring scale/tape
2	3.1 – Yarn, 4.1/ Table 1 -Construction (1) Diameter	Rope gauge Breaking load apparatus
3	4.1 – Construction -Table 1 (7) Linear Density	weighing balance(grams), Measuring scale/tape, Breaking load apparatus
4	Table 1 (8), (9) & (10) Breaking Load and Elongation	Measuring scale, Breaking load apparatus capable to record breaking load and elongation simultaneously
5	Table 1 (11) Length of coil	Breaking load apparatus, weighing balance measuring scale/tape
6	Table 1 (12) Flexibility(angle of sag)	Measuring scale, Angle measuring device
7	A-1 Conditioning of sample	Conditioning Chamber

Annex - B

**SCHEME OF INSPECTION AND TESTING
Braided Nylon Rope for Mountaineering Purposes
As per IS 6590:1972**

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

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – The Standard Mark as given in the Schedule of the shall be printed on labels securely attached to the coil, 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.

3.1 Marking and packing shall be done as per the provisions of the Indian Standard. In addition the following details shall be marked on labels affixed to each coil.

i) Licence No. (CM/L.....)

ii) BIS website details: For BIS Certification Details please visit www.bis.gov.in

4. CONTROL UNIT – All ropes manufactured in a day from same batch of yarn may be taken as one control unit.

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

5.1 All the production which conforms to the Indian Standards and covered by the licence shall be marked with Standard Mark.

6. REJECTIONS – 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.

TABLE 1
LEVELS OF CONTROL
(PARA 5 OF THE SCHEME OF INSPECTION AND TESTING)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or)S: Sub-contracting permitted	Recommended Levels of Control		
Cl.	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Cl.	IS Reference				
3.1.1	Yarn	3.1	IS 6590:1972	S	-	Each Lot received	The yarn received as raw material shall be accompanied by a test certificate
3.2	Rope	3.2	IS 6590:1972	R	3 coils	Each Control unit	Visual examination
4.1	Construction				3 coils	Each Control unit	
4.1, Table 1 (1)	Diameter	A-4	IS 6590:1972	R			
(2)-(6)	Construction	-	Visual	-			
(7)	Linear Density of Rope	A-3	IS 6590:1972	R			
(8)-(10)	Breaking Load & Elongation	A-5	IS 6590:1972	R			
(11)	Length of coil	A-6	IS 6590:1972	R			
(12)	Angle of Sag	A-7	IS 6590:1972	R			
4.2	Slackness of sheath	A-8	IS 6590:1972	R			
6	Marking	-	Visual	-			

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 and submit his own levels of control in column 3 with proper justification for approval by BO Head.