



**PRODUCT MANUAL FOR
GALVANIZED STEEL
CHAIN LINK FENCE FABRIC
ACCORDING TO IS 2721:2003**

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 2721:2003
	Title	:	Galvanized Steel Chain Link Fence Fabric
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	As per clause 5 of IS 2721: 2003
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	1.5 m x 2 + 1 m (chem) + 50 g drilling (chem)
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day :		All tests
6.	Scope of the Licence :		
	Licence is granted to use Standard Mark as per IS 2721:2003 with the following scope:		
	Name of the product	Galvanized Steel Chain Link Fence Fabric	
	Type of Selvage		
	Mesh Size		

ANNEX-A

GROUPING GUIDELINES

1. The following parameters shall be considered for grouping of Galvanized Steel Chain Link Fence Fabric as per IS 2721: 2003:
 - (a) Type of Selvage
 - Both ends of the fabric twisted
 - One end of the fabric knuckled and the other end twisted
 - Both ends of the fabric knuckled
 - Both ends of the fabric without knuckling and twisting
 - (b) Mesh Size – as per Table 1 of IS 2721:2003
2. Considering the above, one sample of Galvanized Steel Chain Link Fence Fabric of any Mesh Size in any Length and Width for each Type of Selvage shall be tested for all requirements to cover all the Mesh Sizes for that particular Type of Selvage.
3. The Firm shall declare the Varieties they intend to cover in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
4. During the operation of licence, it shall be ensured that all varieties covered in the license are tested in rotation, to the extent possible

ANNEX B**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Mesh Size, 6.2 & Table1	Vernier caliper
2	Width, 6.3	Measuring tape
3	Length, 6.4	Measuring tape
4	Tensile Test, 9.1.1	Universal Testing Machine and Vernier caliper
5	Wrapping test, 9.1.2	Mandrel and Magnifying Glass
6	Twist test, 9.1.3	Measuring scale, twisting machine apparatus as per IS 1717.
7	Bend test, 9.1.4	Vernier caliper, protactor
8	Galvanising test, Cl. 9.2	Weighing scale, stop watch Chemicals, glassware, Arrangement for uniformity of coating and adhesion test

The above list is indicative only and may not be treated as exhaustive.

ANNEX C

Scheme of Inspection and Testing

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 – As per the requirement of IS 2721:2003.

4. 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.

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

5. 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

(1) Test Details				(2) Test equipment requirement R: required (or) S: Sub- contracting permitted	(3) Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5	Material		IS 280	S	Material shall be ISI Marked.		
6	Dimensions						
	Mesh Size	6.2 & Table1	IS 2721	R	One	Each roll of one size/type	In case the mesh sizes are different from those mentioned in Table 1, the manufacturer shall declare the sizes and tolerances. Tolerances shall be compatible with those mentioned in Table 1.
	Width	6.3 & Table1	IS 2721	R	One		
	Length	6.4 & Table1	IS 2721	R	One		
7	Workmanship and Finish twist test	7.1 and 7.2	IS 2721	R	Each roll		
9	Tests on Fabric						
9.1	Tests on Wires						
	Tensile Test	9.1.1	IS 2721 IS 1608	R	One	Every fifth coil	This test shall be carried out on mesh and line wires used for manufacturing fabric
	Wrapping test	9.1.2	IS 2721 IS 1755	R	One	Every fifth coil	
	Twist test	9.1.3	IS 2721 IS 1717	R	One	Every fifth coil	
	Bend Test	9.1.4	IS 2721	R	One	Every fifth coil	This test is applicable for mesh and line wires of 5mm diameter and above

9.2	Galvanising Test on Complete Fabric- as per IS 4826 or IS 12753						
	Mass of Zinc Coating	9.2 4.1 7.1	IS 2721 IS 4826 IS 12753	R	One	Every 25 th roll of fabric	This test shall be carried out on wires taken from complete fabric
	Uniformity of coating	9.2 4.2	IS 2721 IS 4826	R	One	Every 25 th roll of fabric	
	Freedom from defects	9.2 4.3 7.2	IS 2721 IS 4826 IS 12753	R	One	Every 25 th roll of fabric	
	Adhesion of coating	9.2 5 8	IS 2721 IS 4826 IS 12753	R	One	Every 25 th roll of fabric	

Note-1: 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.