



**PRODUCT MANUAL FOR
AGRO TEXTILES – FENCING NETS FOR AGRICULTURE AND HORTICULTURE PURPOSES PART 1 FENCING NETS
MADE FROM EXTRUDED POLYMER MESH ACCORDING TO IS 17358(Part 1):2020**

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 17358(Part 1):2020
	Title	:	Agro Textiles – Fencing Nets for Agriculture and Horticulture Purposes Part 1 Fencing Nets made from Extruded Polymer Mesh
	No. of Amendments	:	00
2.	Sampling Guidelines:		
a)	Raw material	:	HDPE used shall conform to Cl. 4 of IS 17358(Part 1):2020
b)	Grouping guidelines	:	NA – Nets of Each Type, Shape and Mass (GSM) to be tested
c)	Sample Size	:	HDPE Granules (1 kg approx.) and Net of Length- 3metres (minimum) and Width as per the product manufactured.
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 :Tests as per clause 5.1, 5.2 and serial number i) to vi) of table 1 to 3of IS 17358(Part 1) : 2016.		
6.	Scope of the Licence .:		
	“Licence is granted to use Standard Mark as per IS 17358 (Part 1): 2020 with thefollowing scope:		
	Name of the product	Agro Textiles – Fencing Nets for Agriculture and Horticulture Purposes – Part 1 – Fencing Nets Made From Extruded Polymer Mesh	
	Type	Light Duty(Hexagonal Shape)/Medium Duty(Square Shape)/Heavy Duty(Diamond Shape)	
	Mass GSM as per the each type	
	Dimension	Individual Widths- as per manufacturer’s production capacity	

ANNEX-A

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.	Colour, Cl. 5.2	Standard Colour Sample as received from the customer
2.	Mass, g/m ² , Cl. 4 and 7, Table 1,2,3 (i)	A) Digital Weighing Balance (L.C. – 0.005g) B) Conditioning Chamber with a) Temperature controller and Digital Indicator b) Humidity controller and digital indicator or Drying Oven C) Graduated Steel Scale or Measuring Tape & Digital Vernier Calliper. D) Flat Horizontal Table E) T-Square (For Oven-Dry Method)
3.	Mesh Size (Machine and Transverse Direction), Cl. 4 and 7, Table 1,2,3 (ii) and (iii)	Digital Vernier Calliper (L.C- 0.02mm)
4.	Thickness at Joint and Filament thickness, Cl. 4 and 7, Table 1,2,3 (iv) and (v)	Flat anvil Micrometer (L.C. – 0.01mm)
5.	Dimesnions (Length and Width), Cl. 4 and 7, Table 1,2,3 (vi)	a) Flat Horizontal Table b) Measuring Tape
6.	Tensile Strength and Elongation Before UV Exposure, Cl. 4 and 7, Table 1,2,3 (vii) and (viii)	a) Tensile testing machine CRE with facility to record/indicate force and separation as per Clause C-2.1 of the IS. b) Sample Cutter/Scissor c) Conditioning Chamber with a) Temperature controller and Digital Indicator b) Humidity controller and digital indicator.
7.	Tensile Strength after UV exposure for 144h	a) Test Chamber with Fluorescent UV lamps Type B with irradiance level 0.63W/m ² with facility for heating and condensation, Tensile testing machine CRE type

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

ANNEX B

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.

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

2. TEST RECORDS – 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 licence, shall be marked on the Fencing nets rolls/bundles or on a label attached to each fencing net roll/bundle, provided always that material so marked conform to requirements of the specification.

3.1 Packing and Marking shall be done as per the provisions of the Indian Standard. In addition, the following shall be incorporated on each net roll/bundle or on a label attached to each fencing net roll/bundle:

i) BIS Licence Number CM/Land

ii) BIS website details i.e. "For details of BIS certification please visit www.bis.gov.in".

4. CONTROL UNIT –For the purpose of this scheme, all the fencing nets rolls/bundles of same type, shape and Mass (GSM) having the same manufacturing parameters and manufactured under similar conditions in a day shall constitute a 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 scheme and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standard and covered by the licence should 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

(1)				(2)	(3)		
Test Details					LEVEL OF CONTROL		
Cl.	Requirements	Test Method		Test equipment requirement R:required(or) S:Sub-contracting permitted	No. of Samples	Frequency	Remark
		Clause	Ref.				
4.1	Material	4.1	IS 17358(Part 1)	S	One	Each batch in a consignment	No further testing is required, if accompanied with the test certificate or ISI Marked.
5.1	Manufacture	5.1	IS 17358(Part 1)	R	Each Roll/Bundle	-	-
5.2	Colour	5.2	IS 17358(Part 1)	R	Each Roll/Bundle	-	-
4 and 7 and Table 1,2,3	Requirements						
	i) Mass	-	IS 1964	R	Two Samples	Each Control Unit	-
	ii) Mesh Size, Machine Direction	Annex-B	IS 17358(Part 1)	R	Five Samples	Each Control Unit	-
	iii) Mesh Size, Transverse Direction	Annex-B	IS 17358(Part 1)	R	Five Samples	Each Control Unit	-
	iv) Thickness at Joint	Annex-B	IS 17358(Part 1)	R	Five Samples	Each Control Unit	-
	v) Filament Thickness	Annex-B	IS 17358(Part 1)	R	Five Samples	Each Control Unit	-
	vi) Dimensions (Length & width)	Annex-B	IS 17358(Part 1)	R	Two Samples	Each Control Unit	-
	vii) Tensile Strength before UV Exposure a) Machine Direction b) Transverse Direction	Annex-C	IS 17358(Part 1)	R	Five Samples	Each Control Unit	-
	viii) Elongation before UV Exposure\	Annex-C	IS 17358(Part 1)	R	Five Samples	Each Control Unit	Applicable only for Light Duty,

	a) Machine Direction b) Transverse Direction						Hexagonal Shape Fencing Nets
	ix) Tensile Strength after UV exposure of 144h a) Machine Direction b) Transverse Direction	Annex-D	IS 17358(Part 1)	R	Two Samples	Once in 15 days	-

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 empaneled 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.