



सेन्ट्रल इंस्टीट्यूट ऑफ प्लास्टिक्स इंजीनियरिंग एण्ड टेक्नालॉजी

(रसायन एवं पेट्रो रसायन विभाग, रसायन एवं उर्वरक मंत्रालय, भारत सरकार)

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क्र. : सिपेट / वी.सी/परीक्षण/ 1109

दिनांक : 06.11.2015

प्रति,

भारतीय मानक ब्यूरो/ Bureau of Indian Standard
3rd Floor, Pushpak Building
"Pushpak" Nurmohamed Shaikh Marg,
Khanpur Ahmedabad -380 001, Gujarat

विषय परीक्षण हेतु ।

सन्दर्भ AHBO/Sample cell

दिनांक : 24.09.2015 & 06.10.2015

महोदय,


कृपया हमारी परीक्षण रिपोर्ट क्रमांक 17647 इनवाइस क्रमांक 608 दिनांक 06.11.2015

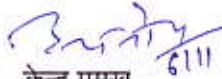
प्राप्त करें।

संलग्न कस्टमर फीड बैक फार्म भरकर वापस भेजने का कष्ट करें ।

धन्यवाद,

भवदीय,


तकनीकी प्रबंधक


केन्द्र प्रमुख 6111

संलग्न : उपरोक्तानुसार



सेन्ट्रल इंस्टीट्यूट ऑफ प्लास्टिक्स इंजीनियरिंग एण्ड टेक्नोलॉजी

(रसायन एवं पेट्रो रसायन विभाग, रसायन एवं उर्वरक मंत्रालय, भारत सरकार)

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Series: **D**

PLASTIC TESTING CENTRE
TEST CERTIFICATE

क्र. No. 8011

Issued to
Bureau of Indian Standard
3rd Floor, Pushpak Building
"Pushpak" Nurmohamed Shaikh Marg,
Khanpur Ahmedabad -380 001, Gujarat



टेस्ट रिपोर्ट नं.17647
दिनांक: 06.11.2015
पेज नं. 1 of 4

TEST REPORT AS PER IS: 16190-2014 with Amendment No. 1

PART - A

PARTICULARS OF SAMPLE SUBMITTED

नमूनाविवरण/ Sample details: Agro Textiles- High density Polyethylene (HDPE)
Laminated Woven lay Flay Tube for Irrigation Purpose- Specification.
- As stated by party

Your Ref. No. : AHBO/Sample cell
Date: 24.09.2015 & 06.10.2015
Code No: AHBO/GR/20150921/PR/2

Grade/Variety/Type/Size/Class	: 63 mm Nominal Dia, 5 layer Laminated fabric.
बैच नं. /Batch No./Lot No./	: LFT/001
उत्पादकता की दिनांक/Date of manufacturing	: 07-09-2015
नमूने की मात्रा /Qty of sample received	: 30mtr. tube +laminated fabric + tap.
प्राप्तनमूनेकीदिनांक/Date of sample received	: 12.10.2015
परीक्षण समय /Test Duration	: 12.10.2015 to 06.11.2015
प्राप्तनमूनेकीस्थिति/Condition of receipt of sample	: Good
अन्य विवरण/Any other details	: Sample Date: 21-09-2015, Sample Type: AS,
Additional Information	: Sample contains 30 mtr tube + laminated fabric + 100 mtr. tape.

Declared Value
30 mtr Length

Note:

1. This report, in full or part, shall not be published, advertised, used for any legal action, unless prior permission has been secured.
2. This test report is only for the sample tested.

PART - B

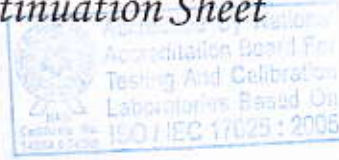
SUPPLEMENTRY INFORMATIONS

- | | | |
|---|---|-----------------------|
| a) Reference to sampling procedure wherever applicable | : | Supplied by the party |
| b) Supporting documents for the measurements taken and Results derived like graphs, tables, sketches and/or Photographs as appropriate to test report, if any (to be attached). | : | As given in Part-C |
| c) Deviation from the test methods as prescribed in Relevant work instruction, if any | : | Nil |

निरंतर ...२ Contd....2

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AlokSahu- Manager (T.S.)



PART-C

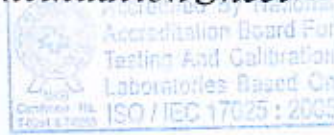
TEST RESULT AS PER IS: 16190-2014 with Amendment No. 1

Sl.N	Clause No.	Name of test	Test Method	Unit	Test value obtained	Specified Requirements
01	4	Materials				
	4.1	HDPE Tapes	--		Conforms	Tape shall be manufactured from HDPE granules
		i) Width of the Tape		mm	2.53	2.50 min.
		ii) Linear Density		denier	1073	700 min.
02.	5.1	Manufacture	--		Conforms	Fabric shall be laminated with the low density polyethylene (LDPE) or suitable combination of LDPE & LLDPE melt of coating grade or each side and the coating shall be UV stabilized by incorporating UV stabilizer.
		Lamination				
03.	5.2	Lamination	--		Conforms	A 5 layer laminated fabric is produced using a combination of 2 layer of HDPE fabric and 3 layers of coating film. Shall be 35 micron(min) The layers of HDPE fabric used to manufacture lay flat tube, shall be joined by sandwich lamination. Shall be 40 micron(min)
		i) coating Thickness		Micron	39	
		ii) Sandwich lamination		Micron	Conforms 55	
04.	5.3	Overlap distance		mm	Conforms	The laminated HDPE woven fabric is to be formed in to lay flat to the required inside diameter using a heat sealing process keeping the minimum overlap of 30 mm.

जिरंतर ...3 Contd...3

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PART-C

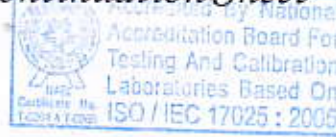
TEST RESULT AS PER IS: 16190-2014 with Amendment No. 1

Sl.N	Clause No.	Name of test	Test Method	Unit	Test value obtained	Specified Requirements	
05.	6.0 Table 2	Mass	IS- 1964	g/m ²	450	Min 260	
		Breaking Strength Before U.V. Exposure	IS- 1969 (Part 1)				
		a)warp		N	1789	1200 (min)	
		b)weft	N	1546	900 (min)		
	6.0 Table 2	Elongation at Break	IS- 1969 (Part 1)				
		a)warp		%	17.37	20±5	
		b)weft		%	17.04	20±5	
	06.	6.0 Table 2	Retention of Breaking Strength After U.V. Exposure for 500hrs	Annex B			85 % of original value(fabric),that is of Table 2
			a)warp		N	1583	
b)weft			N		1359		
6.0 Table 2		Abrasion Resistance	IS14714	%	6.11	Loss in breaking strength shall not be more than 15%	
6.0 Table 2		Trapezoid tear strength	IS14293	N	130	Min 100	
							a) Warp
		b) Weft	N	118	Min 100		
6.0 Table 2		Puncture resistance	Annex C	N	734	Min 300	
6.0 Table 2		Environmental stress cracking test	Annex D		Conforms	There shall be no evidence of stress cracking.	
6.0 Table 2		Accelerated ageing test for 72 h at 70± 1°C	IS 7016 Pt 8	%	5.21	Loss in breaking strength shall not be more than 15 percent	
07.	6.0 Table 2	Cold cracking resistance test at - 5°C	Annex E		Conforms	No specimen shall damage or broken.	
08.	6.1 Table 1	Internal Diameter		mm	63.71	63	
		Tolerance		mm	(+) 0.71	(+)2.5, (-) 0	

निरंतर ...४Contd...4

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**PART-C****TEST RESULT AS PER IS: 16190-2014 with Amendment No. 1**

Sl.N	Clause No.	Name of test	Test Method	Unit	Test value obtained	Specified Requirements
09.	6.2	Workmanship	--		Conforms	The lay flat tube shall be free from dirt, knots, lumps, irregularities of the tape and other visible defects.
10.	6.3	Hydrostatic Burst Pressure test	--	kg/cm ²	Not bursted at 2.6kg/cm ²	Shall not burst before a pressure of 2.6 kg/cm ² is reached.
11.	6.4	Proof pressure test	--	kg/cm ²	Conforms	Internal hydraulic pressure of 1.3 kg/cm ² shall not develop any leakage or sweating nor any thread in the jacket shall break.
12.	6.5	Length Tolerance	--	Mtr. %	30.98 (+) 3.26	Unless specified otherwise, the standard length shall be 30m. Tolerance of +5% shall be permitted on the length prescribed for the lay flat tube by the purchaser. No negative tolerance shall be permitted.
13.	6.6	Kink Test	--	-	Conforms	There shall be no sign of leakage or rupture and no thread in the jacket shall break.
14.	6.7	Welded Seam Strength Before UV Exposure	--	N	1523	Welded seam strength Before UV exposure shall not be less than the 80% of the original actual fabric strength
15.	6.8	Welded Seam Strength After UV Exposure	--	N	1311	The loss in Welded seam strength after UV exposure shall not be More than the 15%

PART-D

Remarks : Nil

Note:

1. Selection of samples for individual test have been done in accordance with respective clause of IS: 16190-2014 with Amendment No.1.
2. Details of test sub-contracted: Nil.
3. Remnant samples will be disposed after 3 months from the date of issue of test report.

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