

एस एम ई परीक्षण केन्द्र,

पूर्व : क्षेत्रीय परीक्षण केन्द्र, मुम्बई

सरकार, सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

अंधेरी रोड, साको नाका,

- 400 072.

फोन : (022)-2857 0588

: (022)-2857 6998

: (022)-2857 2238



**MSME**

MICRO, SMALL & MEDIUM ENTERPRISES  
सूक्ष्म, लघु एवं मध्यम उद्यम

**MSME TESTING CENTRE,**

(Formerly : RTC, Mumbai)

Government of India

Ministry of Micro, Small & Medium

Enterprises

Kurla Andheri Road, Saki Naka,

Mumbai - 400 072.

Tel. : (022)-2857 0588

: (022)-2857 6998

Fax : (022)-2857 2238

परीक्षण/कैलिब्रेशन रिपोर्ट  
**TEST/CALIBRATION REPORT**

कार्य संख्या : Job Order No.:	MSME-TC/M/ELECT/586 /2010-11 /106	तिथि : Date:	22.02.11	रिपोर्ट संख्या : Report No.:	586
को जारी किया : Issued to: M/s.	Miracles Cables, Plot No. A-571, TTC Industrial Area, M.I.D.C., Mahape, Navi Mumbai - 400 701	जारी करने की तिथि : Date of Issue:	टी.आर.-5 तथा तिथि /TR-5 No. & Date 1323 dt. 23.02.2011 1347 dt. 03.03.2011		
सैंपल पर पहचान चिन्ह/Identification Mark of Sample :	आवेदन संख्या/ Request No.:	MC/MSME			
POLYFLEX	तिथि /Date :	22.02.2011			
वांछित परीक्षण / Test Required :	सामान का ब्यौरा : /Material Details:				
Type Test As Per : IS.694 -1990 (Reaffirmed 2005) Specification for PVC Insulated cable for working voltage upto and including 1100 Volts	PVC Insulated & unsheathed single core cable with flexible copper conductor of size 2.5 mm <sup>2</sup> , Voltage grade 1100 V, Colour : Grey -- 15 mtrs.				
क्रम संख्या Sr. No.	परीक्षण का नाम Name of the Test	मानक विशिष्ट Standard Specification	वास्तविक परिणाम Actual Sample Results	टिप्पणी Remarks	
1	Manufacturer's Identification (cl.17)	Manufacturer shall be identified throughout the length of the cable by name or trade mark being printed/embossed/ indented on the cable.	ISI "POLYFLEX" 2.50 SQMM 650/1100V IS-694 CM/L-7192777 MIRACLE CABLES (I) PVT. LTD. printed	Satisfactory	
2	Packing and marking (cl.18)	The cable shall be either wound on reels or drums or supplied in coils packed and labeled with the following information. a) Reference to Indian Standard b) Manufacturer's name brand name or trade mark c) Type of cable & voltage grade d) Number of cores e) Nominal cross-sectional area of conductor	-----	Label not supplied with the cable	

टिप्पणी : यह रिपोर्ट परीक्षण के लिये जमा करवाए गए विशेष सैंपल के लिये है। बिना लिखित अनुमति के इसे दुबारा न बनाया जाए। परीक्षण किए गए सैंपल परीक्षण रिपोर्ट जारी करने के तीस दिन के भीतर वापस लिये जा सकते हैं। पार्टी द्वारा परीक्षित सैंपल रिपोर्ट जारी किये जाने को तारीख से 30 दिनों के भीतर निश्चित रूप से वापस ले जाया जाए अन्यथा, इस सम्बन्ध में किसी भी प्रकार के दावे या पत्राचार पर विचार नहीं किया जाएगा तथा एम सैंपल / सैंपलों का सरकारी प्रक्रिया के अनुसार निपटारा किया जाएगा।

- N.B.** 1) This report pertain to the particular sample submitted for test  
2) This report may not be reproduced without prior written permission of DIRECTOR, MSME TESTING CENTRE, Mumbai.  
3) This tested sample (s) should be collected positively within 30 days from issue of this report failing which no claim whatsoever and no correspondence in matter shall be entertained and such sample(s) will be disposed as per Government Procedure.

द्वारा जारी :  
Issued by

3/5/2011  
आधिकृत हस्ताक्षर  
Authorized Signatory

एम एस एम ई परीक्षण केन्द्र, भारत सरकार, सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय, मुंबई - 400 072.

MSME Testing Centre, Govt. of India, Min. of MSME, Mumbai - 400 072.

Job Order no. MSME-TC/M/ELECT/ 586/2010-11

क्रम संख्या Sr. No.	परीक्षण का नाम Name of the Test	मानक विशिष्ट Standard Specification	वास्तविक परिणाम Actual Sample Results	टिप्पणी Remarks
		f) Cable code g) Colour of core (in case of single core) h) Length of cable on the reel, drum or coil i) Approximate gross mass j) Country of manufacture Year of manufacture		
3	General Construction of cable	-----	Flexible copper conductor of size 2.5 mm <sup>2</sup> with grey core PVC insulation applied by extrusion.	----
4	Insulation			
a)	Application (cl.10.4)	Should be as per Cl. 10.4	As per cl.10.4	Satisfactory
b)	Core identification	Red/Black/Yellow/Blue/White/Grey/Green	Grey	Satisfactory
5	Conductor (cl.4, 9 & 15)			
a)	i) Conductor ii) Flexibility iii) Dia. of wire iv) No. of wires	Solid/ Standed / Flexible Class 1 / 2 / 5 / 6 0.28 mm Max. ... ( Min )	Flexible Class 5 0.19 mm ....	Satisfactory
b)	Annealing Test ( for Copper ) (Before stranding)	Should have a minimum elongation of 13.5%	....	NA
c)	Tensile Test ( for Aluminium)			
i)	Before stranding : Grade	Tensile strength		
	O	Upto and including 100N/mm <sup>2</sup>		
	H <sub>2</sub>	Above 100 upto and including 150 N/mm <sup>2</sup> &	....	NA
	H <sub>4</sub>	Above 150 N/mm <sup>2</sup>		
ii)	After stranding	Should not be less than 95% of above value	....	NA
d)	Wrapping Test (for Aluminium) Test conducted as per Part 3 of IS : 10810.			
i)	Before stranding	The wire should not break.	...	NA
ii)	After stranding			
e)	Resistance Test Conductor Resistance at 20° C for	7.98 ohm/km max.	7.464 ohm/km	Satisfactory
6	Dimensions			
a)	Thickness of Insulation (cl.10.2 & 10.3)	Avg. value : 0.8 mm min Min. value : 0.62 mm min	0.81 mm 0.67 mm	Satisfactory
b)	Overall dimensions (cl.14.1)	4.2 mm (max.)	3.45 mm	Satisfactory

द्वारा जारी :  
Issued by:

10/05/2011

एम एस एम ई परीक्षण केन्द्र, भारत सरकार, सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय, मुंबई - 400 072.

MSME Testing Centre, Govt. of India, Min. of MSME, Mumbai - 400 072.

Job Order no. MSME-TC/M/ELECT/586/2010-11

क्रमा संख्या Sr. No.	परीक्षण का नाम Name of the Test	मानक विशिष्ट Standard Specification	वास्तविक परिणाम Actual Sample Results	टिप्पणी Remarks
7	<b>PHYSICAL TESTS ON INSULATION AND SHEATH ( Cl. 15.1 )</b>			
a)	<b>Without Ageing Insulation</b>			
	Tensile strength	12.5 N/mm <sup>2</sup> min.	16.30 N/mm <sup>2</sup>	Satisfactory
	Elongation at break	150 % / 125-% min.	460 %	
b)	<b>After Ageing in air oven</b>			
	i) Insulation			
	Tensile strength	12.5 N/mm <sup>2</sup> min.	15.21 N/mm <sup>2</sup>	Satisfactory
	Variation ( % )	+ 20 / 25 % max.	+6.69%	
	Elongation at break (%)	150 % / 125 % min.	378%	Satisfactory
	Variation (%)	+ 20 / 35 % max.	+ 17.83 %	
c)	<b>Loss of mass in air oven. Insulation</b>	2 mg /cm <sup>2</sup> max	0.32 mg /cm <sup>2</sup>	Satisfactory
d)	<b>Shrinkage Test Insulation</b>	4% max	1.5 %	Satisfactory
e)	<b>Hot deformation Test Depth of indentation. Insulation</b>	50 % max	22 %	Satisfactory
f)	<b>Heat shock Test Insulation</b>	There should be no sign of crack or scale on the sample.	No sign of crack or scale observed	Satisfactory
8	<b>INSULATION RESISTANCE TEST ( Cl. 15.1 )</b>			
8.1	<b>Insulation resistance constant at 27°C</b>			
a)	At maximum temperature.	36.7 Megohm.Km min	98.418 Megohm.Km	Satisfactory
b)		0.037 Megohm km. min	6.561 Megohm.Km	
8.2	<b>Volume Resistivity at 27°C</b>			
(a)		1 x 10 <sup>13</sup> Ohm-cm Min	2.68 x 10 <sup>13</sup> Ohm-cm	Satisfactory
(b)	At maximum temperature	1 x 10 <sup>10</sup> Ohm-cm Min	1.79 x 10 <sup>12</sup> Ohm-cm	

द्वारा जारी :  
Issued by:

10/3/5/2011

एम एस एम ई परीक्षण केन्द्र, भारत सरकार, सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय, मुंबई - 400 072.

MSME Testing Centre, Govt. of India, Min. of MSME, Mumbai - 400 072.

Job Order no. MSME-TC/M/ELECT/586/2010-11

क्रमा संख्या Sr. No.	परीक्षण का नाम Name of the Test	मानक विशिष्ट Standard Specification	वास्तविक परिणाम Actual Sample Results	टिप्पणी Remarks
9	<b>HIGH VOLTAGE TEST</b> a) At room temperature ( Cl. 16.3 ) b) Water Immersion Test ( Cl.16.2 ) at 60°C i) A. C. Test  ii) D.C. Test.	Should withstand 3 KV (rms) for five minutes for each connection  A voltage of 3 KV (rms) is applied between conductors and water. This voltage raised to 6 KV (rms) in ten seconds and held for 5 minutes should withstand the test.  Should withstand 1.2 Kv DC for 240 hours without breakdown.	Withstood the test  Withstood the test  Withstood the test	Satisfactory  Satisfactory  Satisfactory
10	<b>FLAMABILITY TEST</b> ( Cl. 16.5 )	Period of burning 60 sec. max.  Unaffected portion 50 mm min.	1 sec.  332 mm	Satisfactory

द्वारा जारी :  
Issued by:

10/3/2011