



TC-5389

ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

(Accredited by the National Accreditation Board for Testing and Calibration Laboratories, Govt. of India)

ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, India.

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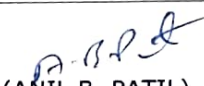
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RP-2425-027126

ULR No.:TC538924000028550F

TEST REPORT		SHEET 1 OF 7
NAME AND ADDRESS OF CUSTOMER M/s Bharat Electrosafe F-71, Site C, UPSIDA Surajpur, Gautam Budh Nagar Greater Noida U.P. 201308	REPORT No.	RP-2425-027126
	DATE OF ISSUE	10-12-2024
	CUSTOMER REF. No.	Letter & Form No. 035
	DATED	22-10-2024
	DATE OF SAMPLE RECEIPT	DATE OF TESTING
	12-11-2024	02-12-2024 to 10-12-2024
SAMPLE DESCRIPTION (As provided by customer) Insulating mat for electrical purposes Thickness: 2.5mm Class: B, Category: III, Colour: Blue, Size:1 x 4 meter (01 Roll) Brand Name: 1. BHARAT ELECTROSAFE 2. INSULATICA	SAMPLE IDENTIFICATION ERDA SAMPLE CODE No. ERDA-00606355 Marking: BharatElectrosafe INSULATING MAT FOR ELECTRICAL PURPOSE SIZE 2.5 MM CLASS B CATEGORY 3 RATED VOLTAGE UP TO 11 KV ISI CM/L 8800129617 BATCH NO 2408025 MFG BY BHARAT ELECTROSAFE Bharat Electrosafe™ HIGH VOLTAGE INSULATING MATS IS 15652:2006 MADE IN BHARAT	
TEST DETAILS		TEST SPECIFICATION
Mentioned on SHEET 2 OF 7		Mentioned on SHEET 2 OF 7
REMARKS: (1) Sample conforms to the requirements as per test specification. (2) Photograph of sample is on SHEET 7 OF 7.		
 CHECKED BY		 (ANIL B. PATIL) APPROVED BY
NOTE: 1. This report relates only to the particular sample received for testing in good condition at ERDA, Vadodara. 2. This report cannot be reproduced in part under any circumstances. 3. Publication of this report requires prior permission in writing from Director, ERDA. 4. This report shall not be used for any purpose such as PR brochures, propaganda, advertisement and/or legal proceedings, unless for the granted purpose. 5. Only the test asked for by the customer has been carried out. 6. Particulars of manufacturer/supplier, given in this report are based on information supplied by the customer, along with the test request/sample. ERDA does not assume any responsibility for the correctness of the information for above mentioned sample under test (SUT). ERDA will not be responsible for any changes in SUT made after the test. This test report is given as per instrument status while testing. 7. In case of any dispute, Vadodara will be the exclusive jurisdiction & shall be construed as where the cause has raised.		
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SHEET 2 OF 7

Sr. No. TEST DETAILS

TEST SPECIFICATION

1. Composition
2. Shape
3. Dimensions
4. Thickness
5. Colour
6. Workmanship and finish
7. Tensile strength & Elongation at break
8. Di-electric properties
 - Insulation resistance with water
 - Leakage current
 - ac Di-electric strength
 - ac Proof voltage
9. Ageing properties-Tensile strength & Elongation after ageing at 70°C for 168 hrs
10. Thermal properties
 - Flame retardance
 - Low temperature resistance
11. Acid, Alkali, Diesel & Transformer oil resistance

IS 15652:2006 with
Amendment No.1 & 2:2010


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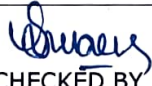

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ULR No.:TC538924000028550F

Discipline: Electrical Testing

Group: Insulating Materials & Insulators

TEST REPORT NO.: RP-2425-027126		DATE OF ISSUE:10-12-2024		SHEET 3 OF 7
Sr. No.	Particular of Tests & Cl. No.	Requirement as per specification	Obtained value	Remarks
1.	Composition Cl.No.5	The insulating mat shall be made from Elastomer, free from any insertions.	The mat is made from Elastomer as declared by the customer and was free from any insertions.	# Conforms
		Upper surface of the insulating mat shall have small aberration to avoid slippery effects while the lower surface shall be plane or could be finished slip resistant without affecting adversely the dielectric property of the mat.	The upper surface has small aberration to avoid slippery effect. The lower surface was slip resistant.	Conforms
2.	Shape Cl.No.6.1	The insulating mat shall be either of specific shape or in rolls to be cut for individual requirements.	The mat was in roll form.	Conforms
3.	Dimensions Cl.No.6.2			
	Length, mm	4000 \pm 20	4011	Conforms
	Width, mm	1000 \pm 20	1018	Conforms
4.	Thickness, mm Cl.No.6.3	2.5 \pm 10%	2.56	Conforms
5.	Colour Cl.No.6.4	No colour with metallic derivative shall be used.	Blue coloured mat with no metallic derivative used, as declared by the customer.	# Conforms
#Remarks given for this test is based on the declaration given by the customer.				
<div style="display: flex; justify-content: space-between; align-items: center;"> <div>  CHECKED BY </div> <div>  </div> </div>				

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TEST REPORT NO.: RP-2425-027126 DATE OF ISSUE:10-12-2024 SHEET 4 OF 7

Sr. No.	Particular of Tests & Cl. No.	Requirement as per specification	Obtained value	Remarks
6.	Workmanship and Finish Cl.No.7	The mat shall be free on both surfaces from pinholes, cracks, blisters, cuts, conductive embedded foreign matter, creases, pinch marks, voids, and prominent ripples.	The mat was free on both surfaces from pinholes, cracks, blisters, cuts, conductive embedded foreign matter, creases, pinch marks, voids, and prominent ripples visually.	Conforms
7.	Tensile strength & Elongation at break Cl.No.8.1			
	Tensile strength, N/mm ²	Min. 15*	22.4	Conforms
	Elongation, %	Min. 250*	260	Conforms
8.	Di-electric properties Cl.No.8.2			
	- Insulation resistance with water at 5000V, MΩ Cl.No.8.2.1	Min. 100000	886000	Conforms
	- Leakage current, mA Cl.No.8.2.2	Max. 10	<2	Conforms
	- ac Di-electric strength, kV(ac rms) Cl.No.8.2.3	Min. 45	47	Conforms
	- ac Proof voltage Cl.No.8.2.4	Mat shall withstand 22kV(ac rms) for 3 minutes without becoming appreciably warm at any spot.	Mat withstood 22 kV(ac rms) for 3 minutes without becoming appreciably warm at any spot.	Conforms

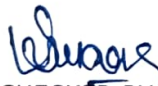

* The requirement for Tensile strength & Elongation for Mat having ambient temperature range -10°C to 55° C.


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TEST REPORT NO.: RP-2425-027126		DATE OF ISSUE:10-12-2024		SHEET 5 OF 7
Sr. No.	Particular of Tests & Cl. No.	Requirement as per specification	Obtained value	Remarks
9.	Ageing Properties- Tensile strength & Elongation at break after ageing at 70°C for 168 hrs. retention,% Cl.No.8.3			
	Tensile strength, %	Min. 75	99	Conforms
	Elongation, %	Min. 75	88	Conforms
10.	Thermal properties Cl.No.8.4			
	-Flame retardance Cl.No.8.4.1	Fire should extinguish within 5 sec after removal of blue flame when tested as per C-5.1	Mat did not catch fire when tested as per C-5.1	Conforms
	-Low temperature resistance Cl.No.8.4.2	Mat shall not show any visible break or crack when folded as per C-5.2.	Mat did not show any visible break or crack when folded as per C-5.2.	Conforms
		Mat shall also pass ac Proof voltage test as per Cl. 8.2.4	Mat also passed ac Proof voltage test as per Cl. 8.2.4	Conforms
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Sr. No.	Particular of Tests & Cl. No.	Requirement as per specification	Obtained value	Remarks
11.	Acid, Alkali, Diesel & Transformer oil resistance when tested as per C-6, retention, % Cl.No.8.5 Tensile strength & Elongation after conditioning in 30% Sulphuric acid for 48 hours at room temperature.			
	- Tensile strength, %	Min.80	99	Conforms
	- Elongation, %	Min.80	98	Conforms
	Tensile strength & Elongation after conditioning in 30% NaOH for 48 hours at room temperature.			
	- Tensile strength, %	Min.80	101	Conforms
	- Elongation, %	Min.80	94	Conforms
	Tensile strength & Elongation after conditioning in diesel (HSD) for 48 hours at room temperature.			
	- Tensile strength, %	Min.80	96	Conforms
	- Elongation, %	Min.80	88	Conforms
	Tensile strength & Elongation after conditioning in Transformer oil for 48 hours at room temperature.			
	- Tensile strength, %	Min.80	95	Conforms
	- Elongation, %	Min.80	87	Conforms

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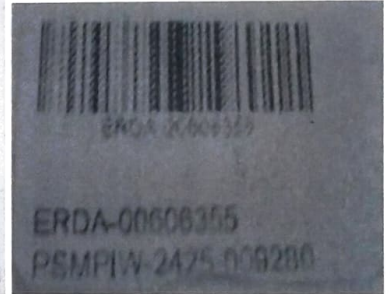
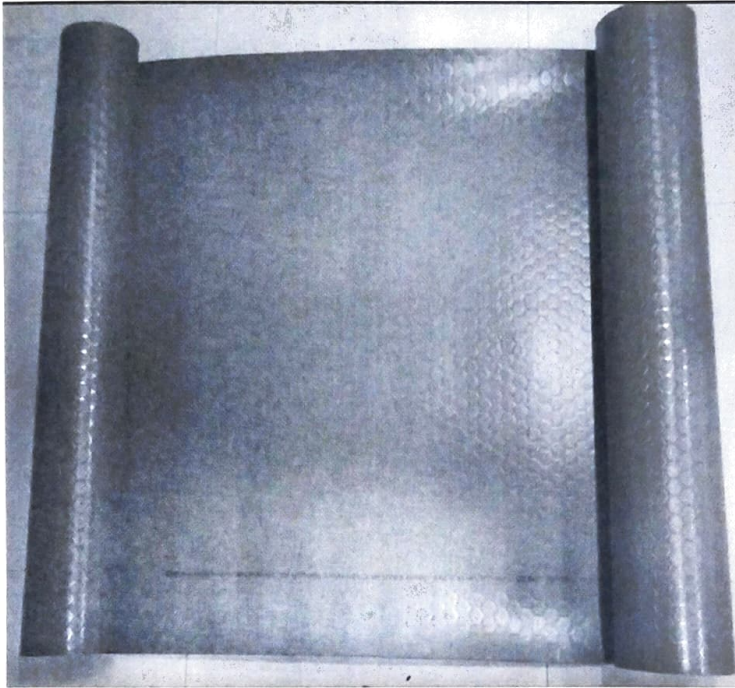


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SHEET 7 OF 7



Photograph of sample in as received condition.

Shweta
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***** End of Test Report *****



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