

ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

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TEST REPORT

SHEET 1 OF 4

NAME AND ADDRESS OF CUSTOMER HPS Exim Private Limited 988/16/2, G.I.D.C. Industrial Estate, Opp. Makarpura Bus Depot Makarpura-390 010, Vadodara Gujarat, India.	REPORT No. DATE	RP-2021-002880 18-06-2020
	CUSTOMER REF. No. DATE	Letter & Form No. 035 03-06-2020
	DATE OF SAMPLE RECEIPT	DATE OF TESTING
	03-06-2020	10-06-2020 to 18-06-2020
SAMPLE DESCRIPTION Polyester Bonded Sheet-UP2 FRP Sheet Grade: FR Grade Type: Polyester Make: HPS	SAMPLE IDENTIFICATION ERDA Sample Code No.: ERDA-00366985	
Sr. No. TEST DETAILS	TEST SPECIFICATION	
1. Flexural strength 2. Izod impact strength 3. Electric strength & Breakdown voltage 4. Water absorption 5. Insulation resistance 6. Density 7. Tensile strength 8. Martens heat distortion temperature 9. Flammability	IEC 60893-2:2003	
	IS 10192:1982 Amendment No.1 (Reaffirmed 2015)	
	UL 94:2013	

REMARKS: (1) Requirement is not mentioned in the test specification, hence remark for conformity is not given in the test report.

(2) # Conformity remarks is not given in test report as opted by the customer.

(3) Photograph of sample in as received condition is on SHEET 4 OF 4.

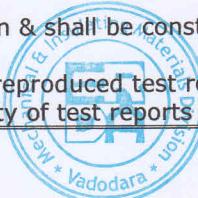
PREPARED BY

CHECKED BY

S. Sheth
(SNEHA SHETH)
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 Only the tests asked for by the customer have been carried out.
5 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 4

Sr. No.	Particular of Tests & Cl. No.	Requirements as per specification	Obtained value	Remarks
1.	Flexural strength, MPa Cl. No. 5.1	--	343.2	--
2.	Izod impact strength, kJ/m ² (Edgewise, Notched) Cl. No. 5.4.3	--	43.8	--
3.	Electric strength & Breakdown voltage Electric strength, kV/mm - Perpendicular to laminations (20s step test in oil at 90°C) Cl. No. 6.1.3.1 Ave. meas. Thickness:3.08mm Breakdown voltage, kV - Parallel to laminations (20s step test in oil at 90°C) Cl. No. 6.1.3.2 Ave. measured width:25.19mm	-- --	11.1 64.0	-- --
4.	Water absorption, mg Cl. No. 8.2 Ave. measured thick.:4.30mm	--	29.1	--
5.	Insulation resistance, MΩ Cl. No. 6.3 (after immersion in water at 25°C for 24h)	--	2190	--
6.	Density at 25°C, g/cm ³ Cl. No. 8.1	--	1.64	--
7.	Tensile strength, MPa Cl. No. 5.6	--	262.5	--
8.	Martens heat distortion temperature (HDT), °C Cl. No. 4.4, Table 3(xiv)	--	>220	--

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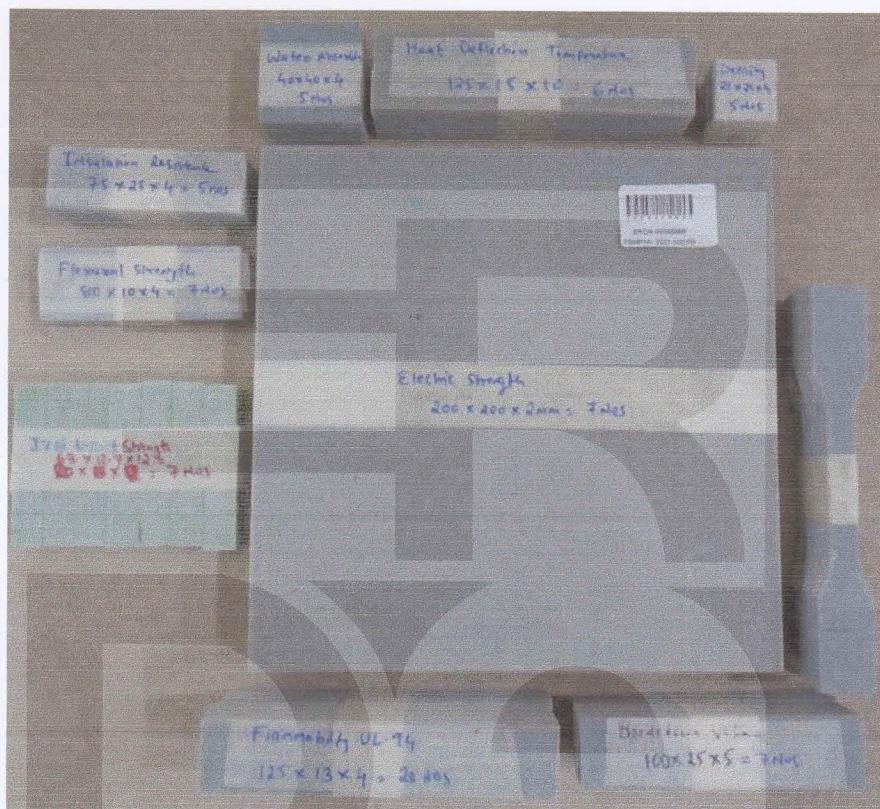
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TEST REPORT No. RP-2021-002880

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SHEET 4 OF 4



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