



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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RP-2425-022811

ULR No.: TC538924000025451F

TEST REPORT

SHEET 1 of 8

NAME & ADDRESS OF CUSTOMER M. N. Rubber Limited, Survey No. 461/Paiky 2/A Behind Suraj Packaging Taluko Muli, At. Shekhar, Surendranagar - 363 510. Gujarat	TEST REPORT NO. : RP-2425-022811 DATE OF ISSUE : 28-10-2024 CUSTOMER REF. NO: Letter DATED : 09-08-2024 <table><tr><td>DATE OF SAMPLE RECEIPT</td><td>DATE OF TESTING</td></tr><tr><td>28-08-2024</td><td>16-10-2024 to 25-10-2024</td></tr></table>	DATE OF SAMPLE RECEIPT	DATE OF TESTING	28-08-2024	16-10-2024 to 25-10-2024
DATE OF SAMPLE RECEIPT	DATE OF TESTING				
28-08-2024	16-10-2024 to 25-10-2024				
SAMPLE DESCRIPTION (As provided by customer) Insulating Rubber hand gloves for electrical purpose Class of gloves : Class 3 Length of glove : 410 mm Size: 11" Category : RC Material : Natural rubber Make : LEEFIST HANDCARE Identification: Electrical rubber hand gloves	SAMPLE IDENTIFICATION Printing:  ERDA Sample Code: ERDA-00597023				
TEST DETAILS As per sheet 2 of 8	TEST SPECIFICATION EN:60903:2003				
REMARK : The sample conforms to all requirements of test specification for the tests at Sr. Nos. 1 to 7 as per sheet 2 of 8.					

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Note:

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S. A. Panchal
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ULR No.: TC538924000025451F

Discipline: Electrical

Group: Insulating Materials & Insulators

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SHEET 2 of 8

TEST DETAILS :

Sr. No.	Cl. No. & test specification	Particulars of tests
1	As per Cl. No. 8.2.2 of EN:60903:2003	Dimensions
2	As per Cl. No. 8.2.3 of EN:60903:2003	Thickness
3	As per Cl. No. 8.3 of EN:60903:2003	Mechanical tests
4	As per Cl. No. 8.4 of EN:60903:2003	Dielectric tests
5	As per Cl. No. 8.5 of EN:60903:2003	Ageing tests
6	As per Cl. No. 8.6 of EN:60903:2003	Thermal tests
7	As per Cl. No. 8.7 of EN:60903:2003	Tests on gloves with special properties
8	As per Cl. No. 6.2.4 of EN:60903:2003	Tear resistance test

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SHEET 3 of 8

Sr. No	Particulars of test & Cl. No.	Requirement as per Specification	Obtained value	Remarks
1	Dimensions [As per Cl. No. 8.2.2 of EN:60903:2003] Length, mm	410 ± 15	422	Conforms
2	Thickness, mm [As per Cl. No. 8.2.3 of EN:60903:2003]	Max. 3.50	3.054	Conforms
3	Mechanical tests [As per Cl. No. 8.3 of EN:60903:2003] Tensile strength and elongation at break [As per Cl. No. 8.3.1 of EN:60903:2003] -Tensile strength, MPa	Min. 16	23.6	Conforms
	-Elongation at break, %	Min. 600	860	Conforms
	Resistance to mechanical puncture [As per Cl. No. 8.3.2 of EN:60903:2003] -Resistance to mechanical puncture, N/mm	Min. 18	Sample 1- 25.75 Sample 2- 24.81	Conforms
	Tension set test [As per Cl. No. 8.3.3 of EN:60903:2003] -Tension set, %	Max. 15	1.50	Conforms

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Sr. No.	Particulars of test & Cl. No.	Requirement as per Specification	Obtained value	Remarks
4	Dielectric test [As per Cl. No. 5.6 of EN:60903:2003] AC proof test -AC proof test after conditioning for moisture absorption by total immersion in water for a period of 16 hours \pm 0.5 hours [As per Cl. No. 8.4.2.1 of EN:60903:2003] -AC Proof test current at 30 kV rms, mA	Sample shall withstand 30 kV (rms) for 3 minutes Max. 22	Withstood 12 mA	Conforms Conforms
5	AC withstand test [As per Cl. No. 8.4.2.2 of EN:60903:2003] - Withstand test voltage, kV rms	Sample shall withstand 40 kV (rms)	Withstood	Conforms
	Ageing test [As per Cl. No. 8.5 of EN:60903:2003] (ageing at $70 \pm 2^\circ\text{C}$ for 168 h and with less than 20% relative humidity) -Tensile strength at break after ageing, % of the unaged value -Tension set after ageing, % -Dielectric proof test without being subjected to the moisture conditioning after ageing -AC Proof test current at 30 kV rms, mA	Min. 80 Max. 15 Sample shall withstand 30 kV (rms) for 3 minutes Max. 22	93.9 1.79 Both gloves withstood Sample 1- 10 mA Sample 2- 11 mA	Conforms Conforms Conforms Conforms

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Sr No	Particulars of test & Cl. No.	Requirement as per Specification	Obtained value	Remarks
6	Thermal test [As per Cl. No. 8.6 of EN:60903:2003] Low temperature test [As per Cl. No. 8.6.1 of EN:60903:2003] -Low temperature test at (-25 ± 3 °C for 1 hour) -Dielectric proof test without being subjected to the moisture conditioning after low temperature test -AC Proof test current at 30 kV rms, mA Flame retardancy test [As per Cl. No. 8.6.2 of EN:60903:2003]	No tear, break or crack shall be visible on the gloves Sample shall withstand 30 kV (rms) for 3 minutes Max. 22	No tear, break or crack was visible on the gloves All three gloves withstood Sample 1- 14 mA Sample 2- 12 mA Sample 3- 14 mA	Conforms Conforms Conforms Conforms

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Sr. No	Particulars of test & Cl. No.	Requirement as per Specification	Obtained value	Remarks
7	Test on Gloves with special properties [As per Cl. No. 8.7 of EN:60903:2003] Category A – Acid resistance [As per Cl. No. 8.7.1 of EN:60903:2003] (after immersion in 32 °B Sulfuric Acid solution at 23 ± 2 °C for 8 ± 0.5 hrs) -Dielectric proof test without being subjected to the moisture conditioning after acid immersion -AC Proof test current at 30 kV rms, mA Tensile strength and elongation at break after acid immersion - Change in tensile strength, Percent of the value unexposed to acid - Change in elongation at break, Percent of the value unexposed to acid Category H – Oil resistance [As per Cl. No. 8.7.2 of EN:60903:2003] (after immersion in liquid 102 at 70 ± 2 °C for 24 ± 0.5 hrs) -Dielectric proof test without being subjected to the moisture conditioning after oil immersion -AC Proof test current at 30 kV rms, mA Tensile strength and elongation at break after oil immersion - Change in tensile strength, Percent of the value unexposed to oil - Change in elongation at break, Percent of the value unexposed to oil	Sample shall withstand 30 kV (rms) for 3 minutes Max. 22 Min. 75% Min. 75%	Both gloves withstood 14 mA 16 mA 84.7 85.2	Conforms Conforms Conforms Conforms Conforms Conforms Conforms Conforms

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Sr. No.	Particulars of test & Cl. No.	Requirement as per Specification	Obtained value	Remarks
	Category Z - Ozone resistance [As per Cl. No. 8.7.3 of EN:60903:2003] The gloves shall be conditioned in an oven for 3h \pm 0.5 h at a temperature of 40° C \pm 2° C and an ozone concentration of 1mg/m ³ \pm 0.01 at standard atmospheric pressure of 1013 mbar	After conditioning the gloves shall exhibit no cracks under visual inspection	No any crack was observed in both gloves	Conforms
	-Dielectric proof test without being subjected to the moisture conditioning	Sample shall withstand 30 kV (rms) for 3 minutes	Both gloves Withstood	Conforms
	-AC Proof test current at 30 kV rms, mA	Max. 22	18 mA 16 mA	Conforms
	Category C - Extremely Low temperature resistance [As per Cl. No. 8.7.4 of EN:60903:2003] -Extremely low temperature test at -40 \pm 3 °C for 24 \pm 0.5 hours	No tear, break or crack shall be visible on the gloves	No tear, break or crack was visible on the gloves	Conforms
	-Dielectric proof test without being subjected to the moisture conditioning after low temperature test	Sample shall withstand 30 kV (rms) for 3 minutes	All three gloves withstood	Conforms
	-AC Proof test current at 30 kV rms, mA	Max. 22	Sample 1- 13 mA Sample 2- 12 mA Sample 3- 15 mA	Conforms
8	Tear resistance test [As per Cl. No. 6.2.4 of EN:60903:2003]	Not applicable	Not applicable	-

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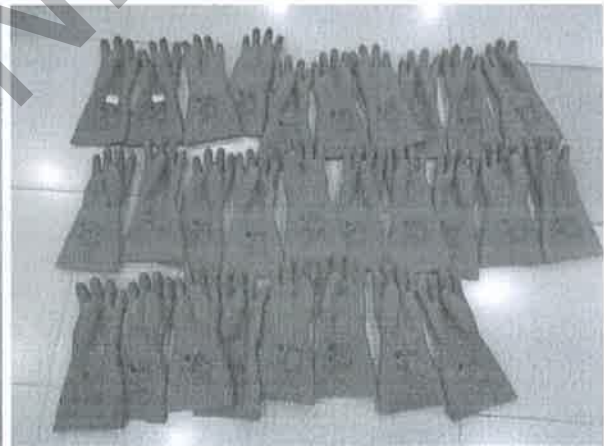
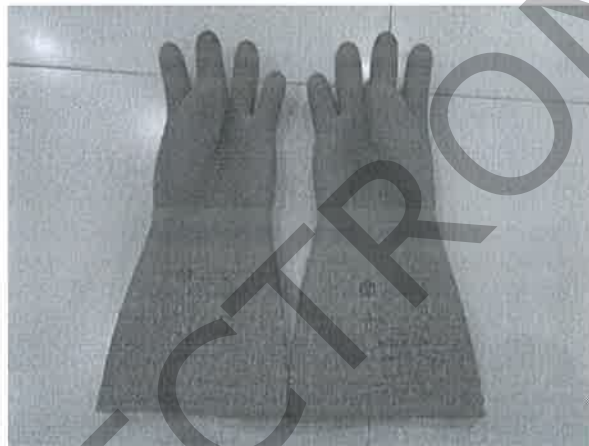


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***** End of Test Report *****

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