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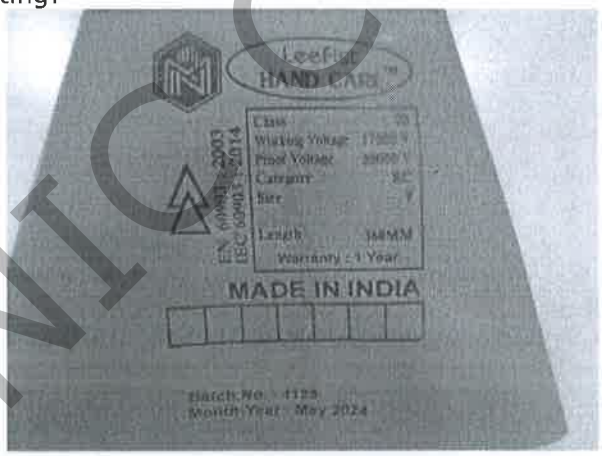
TC-5389

RP-2425-022815

ULR No.: TC538924000025452F

TEST REPORT

NAME & ADDRESS OF CUSTOMER	TEST REPORT NO. : RP-2425-022815 DATE OF ISSUE : 28-10-2024	
M. N. Rubber Limited, Survey No. 461/Paiky 2/A Behind Suraj Packaging Taluko Muli, At. Shekhpar, Surendranagar – 363 510. Gujarat	**CUSTOMER REF. NO:** Letter **DATED :** 09-08-2024	
	DATE OF SAMPLE RECEIPT	**DATE OF TESTING**
	29-08-2024	16-10-2024 to 25-10-2024

SAMPLE DESCRIPTION (As provided by customer)	SAMPLE IDENTIFICATION
Insulating Rubber hand gloves for electrical purpose Class of gloves : Class 2 Length of glove : 360 mm Size: 9" Category : RC Material : Natural rubber Make : LEEFIST HANDCARE Identification: Electrical rubber hand gloves	Printing:  ERDA Sample Code: ERDA-00597034

TEST DETAILS	TEST SPECIFICATION
As per sheet 2 of 8	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.

CHECKED BY

S. A. Panchal
APPROVED BY

Note:

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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 tests asked for by the customer have 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.
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TC 3716247

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ULR No.: TC538924000025452F
Discipline: Electrical Group: Insulating Materials & Insulators

TEST REPORT NO. : RP-2425-022815 DATE OF ISSUE: 28-10-2024 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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TEST REPORT NO. : RP-2425-022815 DATE OF ISSUE: 28-10-2024 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	360 ± 15	369	Conforms
2	**Thickness, mm** [As per Cl. No. 8.2.3 of EN:60903:2003]	Max. 2.90	2.044	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	20.4	Conforms
	-Elongation at break, %	Min. 600	885	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- 37.04 Sample 2- 37.50	Conforms
	Tension set test [As per Cl. No. 8.3.3 of EN:60903:2003]			
	-Tension set, %	Max. 15	1.37	Conforms

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TEST REPORT NO. : RP-2425-022815 DATE OF ISSUE: 28-10-2024 SHEET 4 of 8

Sr. No.	Particulars of test & Cl. No.	Requirement as per Specification	Obtained value	Remarks
4	**Dielectric test** [As per Cl. No. 8.4 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 ± 0.5 hours [As per Cl. No. 8.4.2.1 of EN:60903:2003]	Sample shall withstand 20 kV (rms) for 3 minutes	Withstood	Conforms
	-AC Proof test current at 20 kV rms, mA	Max. 18	6.2 mA	Conforms
	AC withstand test [As per Cl. No. 8.4.2.2 of EN:60903:2003]			
	- Withstand test voltage, kV rms	Sample shall withstand 30 kV (rms)	Withstood	Conforms
5	**Ageing test** [As per Cl. No. 8.5 of EN:60903:2003] (ageing at 70 ± 2°C for 168 h and with less than 20% relative humidity)			
	-Tensile strength at break after ageing, % of the unaged value	Min. 80	93.4	Conforms
	-Tension set after ageing, %	Max. 15	1.58	Conforms
	-Dielectric proof test without being subjected to the moisture conditioning after ageing	Sample shall withstand 20 kV (rms) for 3 minutes	Both gloves withstood	Conforms
	-AC Proof test current at 20 kV rms, mA	Max. 18	Sample 1- 5.8 mA Sample 2- 5.7 mA	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)	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 20 kV (rms) for 3 minutes	All three gloves withstood	Conforms
	-AC Proof test current at 20 kV rms, mA	Max. 18	Sample 1- 6.3 mA Sample 2- 6.2 mA Sample 3- 6.3 mA	Conforms
	Flame retardancy test [As per Cl. No. 8.6.2 of EN:60903:2003]	Flame shall not have reached the reference line located on the test piece 55 mm from its edge, within 55 second after withdrawal of the flame	Flame did not reach the reference line located on the test piece 55 mm from its edge, within 55 second after withdrawal of the flame	Conforms

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TEST REPORT NO. : RP-2425-022815 DATE OF ISSUE: 28-10-2024 SHEET 6 of 8

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	Sample shall withstand 20 kV (rms) for 3 minutes	Both gloves withstood	Conforms
	-AC Proof test current at 20 kV rms, mA	Max. 18	7.2 mA 7.1 mA	Conforms
	Tensile strength and elongation at break after acid immersion			
	- Change in tensile strength, Percent of the value unexposed to acid	Min. 75%	82.4	Conforms
	- Change in elongation at break, Percent of the value unexposed to acid	Min. 75%	82.2	Conforms
	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	Sample shall withstand 20 kV (rms) for 3 minutes	Both gloves withstood	Conforms
	-AC Proof test current at 20 kV rms, mA	Max. 18	9.2 mA 9.4 mA	Conforms
	Tensile strength and elongation at break after oil immersion			
	- Change in tensile strength, Percent of the value unexposed to oil	Min. 50%	77.4	Conforms
	- Change in elongation at break, Percent of the value unexposed to oil	Min. 50%	77.1	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 ± 0.5 h at a temperature of 40° C ± 2° C and an ozone concentration of 1mg/m^3 ± 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 20 kV (rms) for 3 minutes	Both gloves Withstood	Conforms
	-AC Proof test current at 20 kV rms, mA	Max. 18	9.6 mA 9.2 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 ± 3 °C for 24 ± 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 20 kV (rms) for 3 minutes	All three gloves withstood	Conforms
	-AC Proof test current at 20 kV rms, mA	Max. 18	Sample 1- 8.2 mA Sample 2- 8.1 mA Sample 3- 7.9 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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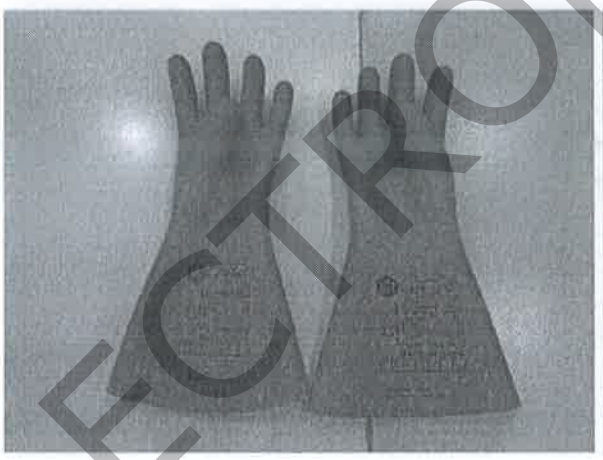

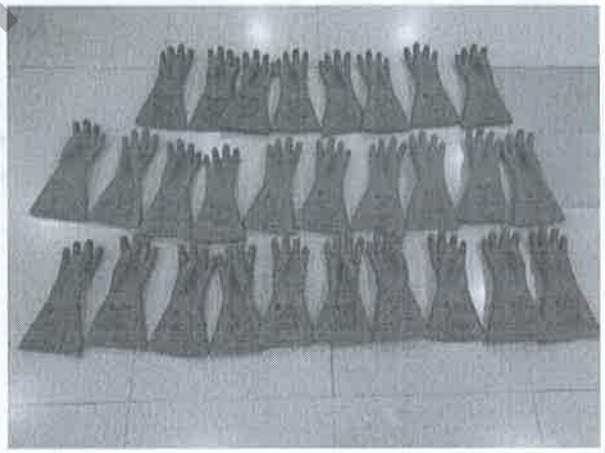

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***** End of Test Report ****