"Progress Through Innovation, Technology and Customer Satisfaction"

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February 8, 2006

- TEST REPORT -

PN# 66025
PO#

Prepared for:

Shamini Shanmugam
GB Industries Sdn. Bhd.
44-1 Jalan USJ 10/1b
47620 Subang Jaya Selangor Malaysia

Prepared by: Sandy Jones

Approved by: Jim Drummond

ACCREDITED

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44-1 Jalan USJ 10/1b
47620 Subang Jaya Selangor Malaysia

SUBJECT: Physical testing on material submitted by the above company to ASTM D 120-02a test specification. PO# Wire Transfer

RECEIVED: Two (2) pairs of gloves identified as Novax Orange Rubber Insulating Gloves Class 1 Beaded Cuff Size 8

POLYMER IDENTIFICATION, ASTM D 3677-90(95)

Instrument:	Perkin-Elmer Spectrum BX Spectrometer
Resolution:	4.0
Number of Scans:	6
Method of Preparation:	Film

RESULTS

Polyisoprene

DIMENSIONS, PARA. 17.1 - 17.3.1
Three gloves tested.
Average of four readings reported.

REQUIREMENTS: Thickness Crotch, mm = 0.63 - 1.52
Thickness Palm & Back, mm = 0.76 - 1.52

	LENGTH, mm	WIDTH, mm	PALM, mm	CROTCH, mm	BACK, mm
Glove 1	355	190	1.30	1.21	1.38
Glove 2	357	186	1.34	1.20	1.34
Glove 3	358	192	1.31	1.24	1.35

ORIGINAL PHYSICAL PROPERTIES, ASTM D 412-98a(02)e1, D 2240-03, D 624-00e1
Die C dumbbells tested at 20 in/min.

	RESULTS	REQUIREMENTS	PASS/FAIL
Shore A Durometer, points	39	47 max.	Pass
Tensile Strength, MPa	27.9	17.2 min.	Pass
Ultimate Elongation, %	824	600 min.	Pass
100% Modulus, MPa	0.75	-	-
200% Modulus, MPa	1.04	2.1 max.	Pass
300% Modulus, MPa	1.41	-	-
Tear Strength Die C, kN/m	51.4	21 min.	Pass

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PUNCTURE RESISTANCE, ASTM D 120-02a
Palm area punctured at 20 in/min.

	RESULTS	REQUIREMENTS	PASS/FAIL
Puncture Resistance, kN/m	19.32	18 min.	Pass

OZONE RESISTANCE, ASTM D 1149-99
Test specimens per ASTM D 518-99, Method A
Specimens exposed 3 hrs. @ 50 pphm @ 40°C, 20% elongation.
Observations made at 7x magnification.

RESULTS	REQUIREMENTS	PASS/FAIL
No cracks	No cracks	Pass

HEAT-AGED PROPERTIES, ASTM D 573-04
Specimens aged 168 hrs. @ 70°C in a forced air oven.

	RESULTS	REQUIREMENTS	PASS/FAIL
Durometer, point change	-6	-	-
Tensile Strength, % of original	96.4	80 min	Pass
Elongation, % of original	99.7	80 min.	Pass

A-C PROOF TEST ASTM D120-95, SECTION 18.4.2
The glove was filled with tap water and immersed in water to a depth about 1 ½ inches from the cuff. A metal rod was lowered inside the glove as one electrode and a metal rod placed in the water tank outside the glove as the other electrode. A voltage was applied to the electrodes at an increasing rate of 1,000 V/s until specified voltage was reached. For Class 1 glove a maximum voltage of 10,000 V and a maximum current of 14 mA were used. The voltage was applied for a period of 3 minutes after which the voltage was lowered to 0 V.

	Pass/Fail	Measured Current
1	Passed	6 mA
2	Passed	6 mA

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A-C MOISTURE ABSORPTION/PROOF TEST ASTM D120-95, SECTION 18.4.4

The glove was filled with tap water and immersed in water to a depth about 1 ½ inches from the cuff. The glove was soaked for a period of 16 hours. A metal rod was lowered inside the glove as one electrode and a metal rod placed in the water tank outside the glove as the other electrode. A voltage was applied to the electrodes at an increasing rate of 1,000 V/s until specified voltage was reached. For Class 1 glove a maximum voltage of 10,000 V and a maximum current of 14 mA were used. The specified voltage was applied for a period of 3 minutes after which the voltage was lowered to 0 V.

	Pass/Fail	Measured Current
1	Passed	10 mA
2	Passed	10 mA

A-C BREAKDOWN TEST ASTM D120-95, SECTION 18.4.3

The glove was filled with tap water and immersed in water to a depth about 1 ½ inches from the cuff. A metal rod was lowered inside the glove as one electrode and a metal rod placed in the water tank outside the glove as the other electrode. A voltage was applied to the electrodes at an increasing rate of 1,000 V/s until specified voltage was reached. For Class 1 glove a maximum voltage of 20,000 V was used.

	Pass/Fail	Measured Current
1	Passed	26 mA
2	Passed	28 mA

Sandy Jones
Project Technician
AKRON RUBBER DEVELOPMENT LABORATORY, INC.

Jim Drummond
Physical Testing Manager

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