MCR Safety Test Report

685 Highway 72
Piperton, TN 38017

January 10, 2018

Report Number: TAF1695

Customer Name:

Craig Baudendistel

MCR Safety

1255 Schilling Blvd. W.

Collierville, TN 38017

Test Standard(s) Requested:	**ANSI 105-16 Conductive Heat Resistance**	**Product Category:**	**Gloves**
Test Method(s) Used:	**ASTM F1060-08**	**Date of receipt of application form:**	**12/29/2017**
Style / Article No.:	**6932 & 6944**	**Date of receipt of sample:**	**01/05/2018**
Sample Description:	**Doubled Dipped Neoprene, Foam Liner**	**Testing Period:**	**01/09/2018**
Number of sample(s)	**5 gloves**	**Condition of Samples:**	**Good – From Sample Room**

1. Conclusion:

MCR Safety conducted conductive heat resistance tests on the 6932 & 6944 Glove, and the results obtained were as follows. The results relate only to the items tested:

ITEM	Time to Pain	Time to 2nd Degree Burn	Highest Temperature Achieved	Conductive Heat Resistance LEVEL
6932 & 6944	**23.26**	**38.54**	**320°C or 608°F**	**5**

The glove achieved level 5 conductive heat resistance. The sample was tested at 320°C, and it took 23.26 seconds for heat to penetrate through the insulation of the glove and 38.54 seconds before 2nd degree burn would have occurred. Samples did smoke and became slightly sticky when tested to 320°C which may not be safe for inhalation. They also smoked when tested at 200°C or 392°F slightly.

Test Performed by: Jerry Porter

Test Report Written by: Jerry Porter

Approved by:

Original Signed

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Sam Braswell

Corporate Quality Assurance Manager

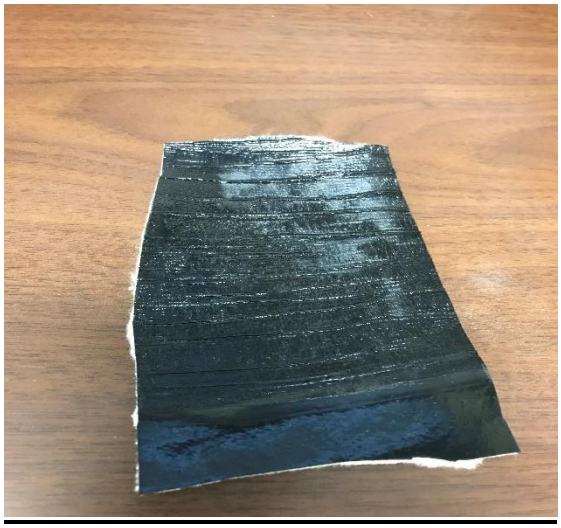
MCR Safety

2. Sample(s) description by the laboratory:

6932 & 6944 – **Black Jack® 14" Black Multi-Dipped Neoprene, Foam liner, Etched Rough Finish**

Numbers of Layers Tested: Multiple – 2 layers. The outer layer, Double Dipped Neoprene, was tested face down on the hot plate. The second layer, Foam Liner, was tested while on top of the Doubled Dipped Neoprene Coating.

After Testing Pictures:



3. Table of Performance Level for Glove:

ASTM F1060-08 REQUIREMENTS

Level	Highest contact temperature (°C) at which both time-to-second degree burn is greater than or equal to 15 seconds and alarm time is greater than or equal to four seconds	
0	< 80°C	<176°F
1	80°C	176°F
2	140°C	284°F
3	200°C	392°F
4	260°C	500°F
5	320°C	608°F

* The alarm time is the difference between the measure “time-to-second degree burn” and the “time-to-pain”.

* Conductive heat resistance testing measures the insulation provided by the glove when exposed to and in contact with a hot surface. Higher temperatures indicate gloves with greater insulation.

* Pressure applied to sample is .50 PSI.

4. Test Results:

Sample	Weight of Samples (grams)	Thickness of Samples (MM)	Time to Pain	Time to 2nd Degree Burn	Highest Temperature Achieved	Conductive Heat Resistance LEVEL
1	13.93	2.50	24.07	39.77	320°C or 608°F	5
2	14.16	2.64	21.78	35.97	320°C or 608°F	5
3	14.76	2.85	23.78	39.29	320°C or 608°F	5
4	14.46	2.69	22.71	37.28	320°C or 608°F	5
5	15.00	2.58	23.97	40.38	320°C or 608°F	5
AVG	**14.46**	**2.65**	**23.26**	**38.54**	**320°C or 608°F**	**5**

* Samples were conditioned at 120°F four hours prior to testing in order to remove moisture from the samples.

* Samples were conditioned at 23±2°C and 50±5%RH for at least four hours after being in the oven prior to testing as required by the test procedure.

* The conductive heat test machined was calibrated by stacking 6 sheets of newspaper (.021 ± .002inch thick) at 200°C and recording a time to pain of 1 second ± .2 and time to 2nd degree burn of 3 seconds ± .2

* Testing was performed on the palm of the samples.

* Testing was performed outside of the ITC lab controlled environment. The tests were moved to an extra room in MCR's Piperton, TN warehouse for testing in an environment of 48°F and 44% humidity. This was due to the lab not being equipped with enough space to mitigate the risk of smoke inhalation by ITC lab personnel and melting of the coated gloves onto surfaces.

-End of Report-