



4700 Broadmoor SE, Suite 200  
Kentwood, MI 49512

Telephone: 616-656-7401  
Facsimile: 616-656-2022  
www.intertek-etlsemko.com

EAGLE MHC CO.  
Date: April 28, 2016  
P.O. No.: 219005  
Revision Date: January 22, 2019

Report No.: 102551777GRR-01  
Reference No.: Qu-00680878  
Page 1 of 11

**Test Report For:**

**EAGLE MHC CO.**

**304 Stainless Steel Plaques**

**SEFA 8 M-2014: 8.1 Chemical Spot and 8.2  
Hot Water Tests**

**Marie Peck**  
**Project Manager**

**Gary Liu**  
**Reviewer**



*This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.*

EAGLE MHC CO.  
Date: April 28, 2016  
P.O. No.: 219005  
Revision Date: January 22, 2019

Report No.: 102551777GRR-01  
Reference No.: Qu-00680878  
Page 2 of 11

Attention: Kevin King  
**Eagle MHC Co.**  
100 Industrial Blvd  
Clayton, DE 19938  
Phone: (302) 653-3000  
E-Mail: KKing@eaglegrp.com

**DATE RECEIVED:** 04/19/16  
**DATES TESTED:** 04/25/16-04/27/16

**DESCRIPTION OF SAMPLES:**

Part Description: 304 Stainless Steel plaques  
Material Submitted: Five (5) of 304 stainless steel plaques 4"-12"  
Material Specification: SEFA 8M-2014  
Condition of Test Sample: Production

**WORK REQUESTED / APPLICABLE DOCUMENTS:**

Chemical Spot Test:	SEFA 8M-2014, Section 8.1
Hot Water Test:	SEFA 8M-2014, Section 8.2

**Conclusions:**

Chemical Spot Test:	*Conforming
Hot Water Test:	Conforming

\* Suitability for a given application is dependent upon the chemicals used in a given laboratory.

Disposition of Test Specimens/Samples:

Test samples were properly disposed.

**CHEMICAL SPOT TEST PROCEDURE:**

Date Received: 04/19/16  
Dates Tested: 04/25/16-04/27/16

Description of Samples:

Part Description: 304 Stainless Steel plaques  
Material Submitted: Five (5) of 304 stainless steel plaques 4"-12"  
Material Specification: SEFA 8M-2014  
Condition of Test Sample: Production

Test Procedure:

Test Method: SEFA 8M-2014, Sec 8.1  
The received sample to be tested for chemical resistance as described herein: Place panel on flat surface, clean with soap (Liqui-Nox at 5% concentration) and water and blot dry. Condition the panel for 48-hours at 73±3°F (23±2°C) and 50 ± 5% relative humidity. Test the panel for chemical resistance using forty-nine (49) different chemical reagents by the following methods.

Method A: Test volatile chemicals by placing a cotton ball saturated with reagent in the mouth of a 1-oz. (29.574cc) bottle and inverting the bottle on the surface of the panel. The cotton ball shall remain in contact with the sample for duration of the test.

Method B: Test non-volatile chemicals by placing five drops of the reagent on the surface of the panel and covering with a 24 mm watch glass, convex side down.

For both of the above methods, leave the reagents on the panel for a period of one hour. Wash off the panel with water, clean with detergent (Liqui-Nox at 5% concentration) and naphtha, and rinse with deionized water. Dry with a towel and evaluate after 24 hours at 73±3°F (23±2°C) and 50 ± 5% relative humidity using the following rating system.

Rating Scale: Level 0 No detectable change.  
Level 1 Slight change in color or gloss.  
Level 2 Slight surface etching or severe staining.  
Level 3 Pitting, cratering, swelling, or erosion of coating. Obvious and significant deterioration.

Side: Removed protected film to expose test side  
Number of Samples Tested: Five (5) sections

Acceptance Criteria:

The range of results is provided to establish the acceptable range for Laboratory Grade Finish. Results will vary from manufacturer to manufacturer. Laboratory grade finishes should result in no more than four (4) Level 3 conditions. Suitability for a given application is dependent upon the chemicals used in a given laboratory.

Results:

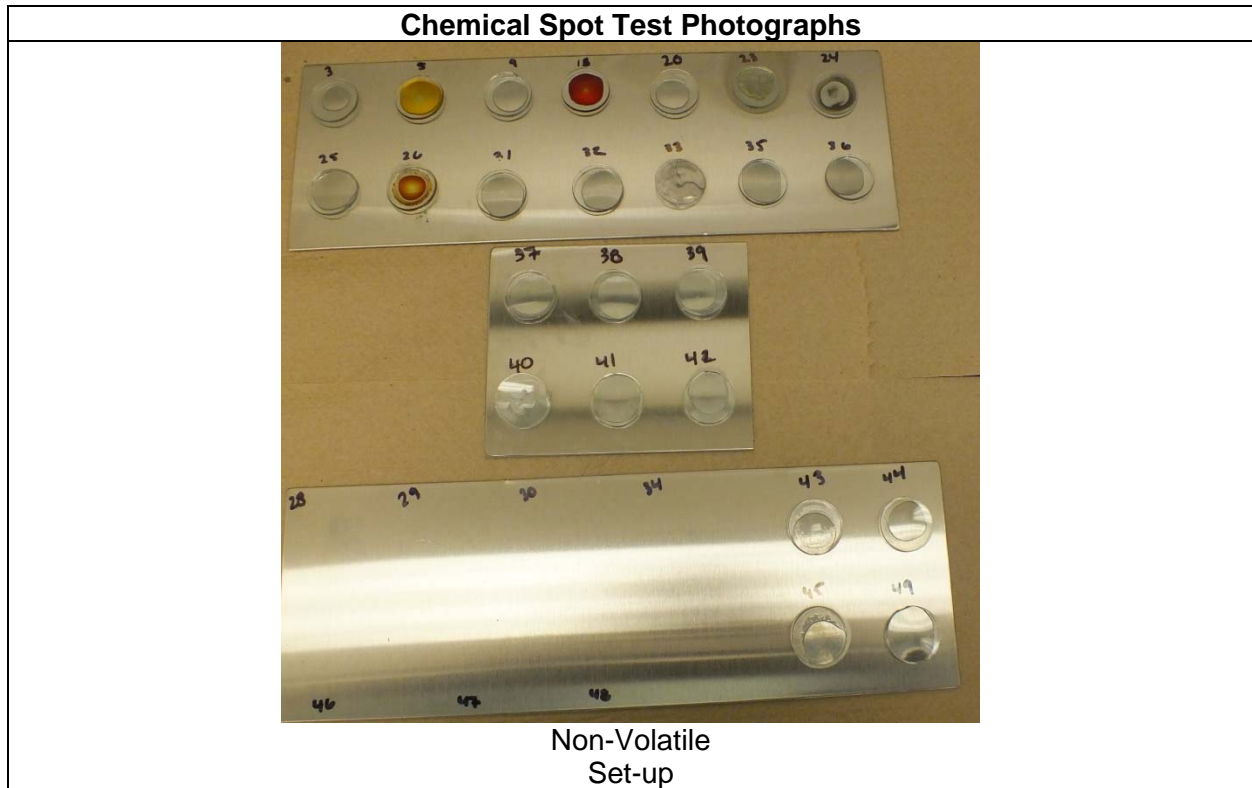
<b>Volatile Chemicals</b>				
<b>Test No.</b>	<b>Chemical</b>	<b>Method</b>	<b>Rating</b>	<b>Comments</b>
1	Acetate, Amyl	A	0	
2	Acetate, Ethyl	A	0	
4	Acetone	A	1	Gloss Change
6	Alcohol, Butyl	A	0	
7	Alcohol, Ethyl	A	0	
8	Alcohol, Methyl	A	0	
10	Benzene	A	0	
11	Carbon Tetrachloride	A	0	
12	Chloroform	A	1	Gloss Change
14	Cresol	A	0	
15	Dichloroacetic Acid	A	1	Gloss/Color Change
16	Dimethylformamide	A	0	
17	Dioxane	A	0	
18	Ethyl Ether	A	0	
19	Formaldehyde, 37%	A	0	
21	Furfural	A	1	Color Change
22	Gasoline	A	0	
27	Methyl Ethyl Ketone	A	0	
28	Methylene Chloride	A	1	Gloss Change
29	Mono Chlorobenzene	A	0	
30	Naphthalene	A	0	
34	Phenol, 90%	A	0	
46	Toluene	A	0	
47	Trichloroethylene	A	1	Gloss Change
48	Xylene	A	0	

<b>Non-Volatile Chemicals</b>				
<b>Test No.</b>	<b>Chemical</b>	<b>Method</b>	<b>Rating</b>	<b>Comments</b>
3	Acetic Acid, 98%	B	0	
5	Acid Dichromate, 5%	B	0	
9	Ammonium Hydroxide, 28%	B	0	
13	Chromic Acid, 60%	B	1	Color Change
20	Formic Acid, 90%	B	1	Gloss Change
23	Hydrochloric Acid, 37%	B	1	Color Change
24	Hydrofluoric Acid, 48%	B	2	Severe Staining
25	Hydrogen Peroxide, 30%	B	0	
26	Iodine, Tincture of	B	1	Gloss Change
31	Nitric Acid, 20%	B	0	
32	Nitric Acid, 30%	B	0	
33	Nitric Acid, 70%	B	0	
35	Phosphoric Acid, 85%	B	0	
36	Silver Nitrate, Saturated	B	0	
37	Sodium Hydroxide, 10%	B	1	Gloss Change
38	Sodium Hydroxide, 20%	B	0	
39	Sodium Hydroxide, 40%	B	0	
40	Sodium Hydroxide, Flake	B	0	
41	Sodium Sulfide, Saturated	B	1	Gloss Change
42	Sulfuric Acid, 33%	B	0	
43	Sulfuric Acid 77%	B	0	
44	Sulfuric Acid, 96%	B	0	
45	Sulfuric Acid, (77%) and Nitric Acid (70%), equal parts	B	0	
49	Zinc Chloride, Saturated	B	0	

Totals			
Items	Requirement	No. Reagent with 3 Ratings	Disposition
Volatile Subtotal:	-	0	---
Non-volatile Subtotal:	-	0	---
Grand Totals:	No More than Four Level 3 Conditions	0	*Conforming

\* Suitability for a given application is dependent upon the chemicals used in a given laboratory.

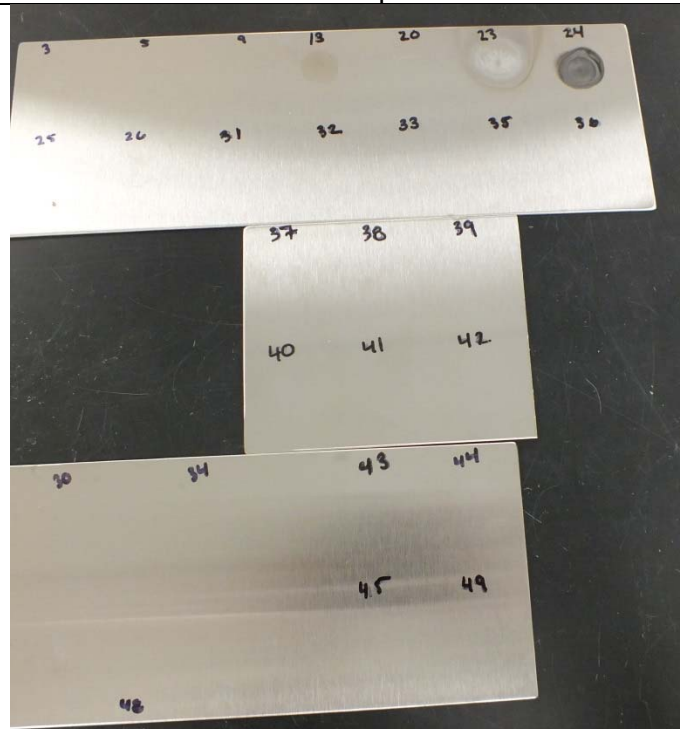
Disposition of Test Specimens/Samples:  
 Test samples were properly disposed.



### Chemical Spot Test Photographs

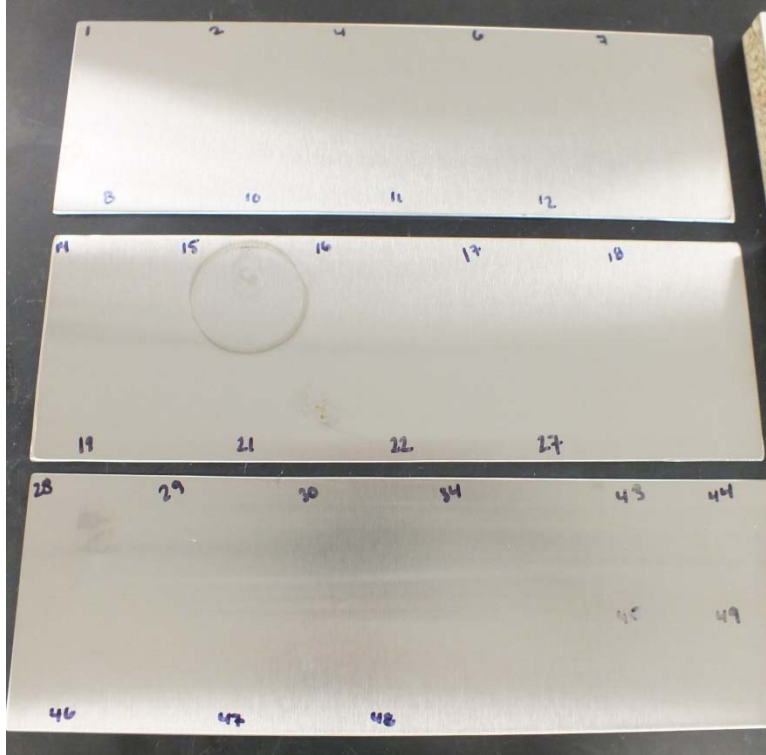


Volatile  
Set-up



Non-Volatile

**Chemical Spot Test Photographs**



Volatile  
After Exposure



EAGLE MHC CO.  
Date: April 28, 2016  
P.O. No.: 219005  
Revision Date: January 22, 2019

Report No.: 102551777GRR-01  
Reference No.: Qu-00680878  
Page 9 of 11

**HOT WATER TEST PROCEDURE:**

Date Received: 04/19/16  
Dates Tested: 04/25/16-04/27/16

Description of Samples:

Part Description: 304 Stainless Steel plaques  
Material Submitted: Five (5) of 304 stainless steel plaques 4"-12"  
Material Specification: SEFA 8M-2014  
Condition of Test Sample: Production

Test Procedure:

Test Method: SEFA 8M-2014, Sec 8.2  
Procedure: Hot water (190 to 205°F [88°C to 96°C]) shall be allowed to trickle (with a steady stream and at a rate of not less than 6 ounces [177.44 cc] per minute) on the finished surface, which shall be set at an angle of 45-degrees, for a period of five minutes.

Side: Does not matter  
Number of Specimens Tested: One (1) Section

Acceptance Criteria:

After cooling and wiping dry, the finish shall show no visible effect from the hot water.

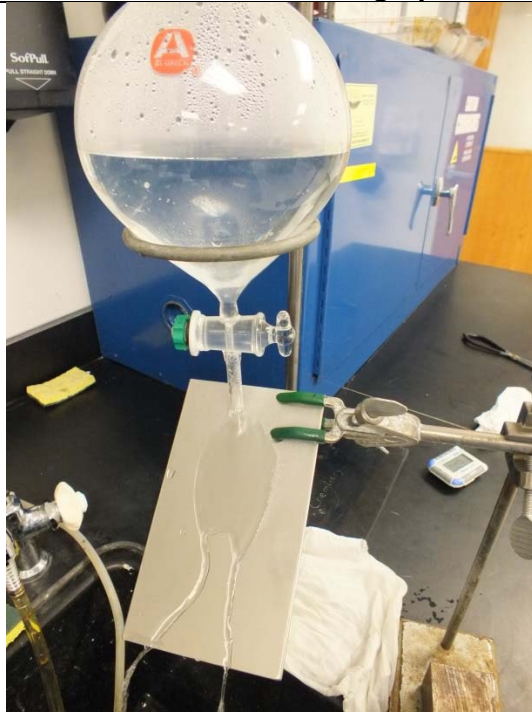
Results:

Sample	Visible Effects From Hot Water	Disposition
1	None	Conforming

Disposition of Test Specimens/Samples:

Test samples were properly disposed.

**Hot Water Test Photographs**



Set-up



After Exposure

