

Performance Coatings Group
Greensboro Wood Lab

Date: 9/28/2023

To: John Boebel
From: Brian L Brown
Subject: LWR WR-013244

Summary: SEFA 3 chemical resistance testing was performed on customer supplied solid maple surface coated with Sherwin Williams UV system V86F90002 & T86FH0063.

Purpose: Determine chemical resistance of the customer wood block surface using the method outlined in the SEFA 3 standard.

Procedure: **Note: The following procedure was taken from section 2.1 of the SEFA 3 section of the SEFA Desk Reference 5th edition and is not owned by The Sherwin Williams Company.**

A cotton ball was saturated with the volatile reagent and placed in a 20ml vial which was then inverted so the saturated cotton contacted the test surface (Method A). Five drops of non-volatile reagents were applied to the test surface and covered with a 25mm watch glass (Method B). After 24hrs the reagents were removed with a clean rag and the panel was rinsed thoroughly with water, then a 0.5% detergent solution, and finally isopropanol and then wiped dry. The panels were evaluated by the following scale.

Level 0: No detectable change

Level 1: Slight change in color or gloss, but no changes in function or life of surface

Level 2: Clearly discernable change in color or gloss but no significant impairment of surface life or function.

Level 3: Objectionable change in appearance due to discoloration or etch, possibly resulting in deterioration of function over an extended period.

Results Table

| # | Chemical Reagent | Test Method | Level Rating |
|----|--------------------|-------------|--------------|
| 1 | Amyl Acetate | A | 0 |
| 2 | Ethyl Acetate | A | 0 |
| 3 | Acetic Acid | B | 0 |
| 4 | Acetone | A | 0 |
| 5 | Acid Dichromate 5% | B | 2 |
| 6 | n-Butanol | A | 0 |
| 7 | Ethanol, Denatured | A | 0 |
| 8 | Methanol | A | 0 |
| 9 | Ammonium Hydroxide | B | 0 |
| 10 | Benzene | A | 0 |

The Sherwin-Williams Company Performance Coatings Group 113 Stage Coach Trail, Greensboro, NC 27409

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| | | | |
|----|--|---|---|
| 11 | Carbon Tetrachloride | A | 0 |
| 12 | Chloroform | A | 0 |
| 13 | Chromic Acid 60% | B | 2 |
| 14 | Cresol | A | 1 |
| 15 | Dichloroacetic acid | A | 2 |
| 16 | Dimethylformamide | A | 1 |
| 17 | Dioxane | A | 0 |
| 18 | Ethyl Ether | A | 0 |
| 19 | Formaldehyde 37% | A | 0 |
| 20 | Formic Acid 90% | B | 2 |
| 21 | Furfural | A | 0 |
| 22 | Gasoline | A | 0 |
| 23 | Hydrochloric Acid 37% | B | 1 |
| 24 | Hydrofluoric Acid 48% | B | 2 |
| 25 | Hydrogen Peroxide 30% | B | 1 |
| 26 | Iodine, Tincture | B | 2 |
| 27 | Methyl Ethyl Ketone | A | 0 |
| 28 | Methylene Chloride | A | 0 |
| 29 | Chlorobenzene | A | 0 |
| 30 | Naphthalene | A | 0 |
| 31 | Nitric Acid 20% | B | 2 |
| 32 | Nitric Acid 30% | B | 2 |
| 33 | Nitic Acid 70% | B | 2 |
| 34 | Phenol 90% | A | 2 |
| 35 | Phosphoric Acid 85% | B | 1 |
| 36 | Silver Nitrate, Saturated | B | 0 |
| 37 | Sodium Hydroxide 10% | B | 2 |
| 38 | Sodium Hydroxide 20% | B | 2 |
| 39 | Sodium Hydroxide 40% | B | 2 |
| 40 | Sodium Hydroxide Flake | B | 2 |
| 41 | Sodium Sulfide, Saturated | B | 2 |
| 42 | Sulfuric Acid 33% | B | 2 |
| 43 | Sulfuric Acis 77% | B | 2 |
| 44 | Sulfuric Acid 96% | B | 3 |
| 45 | Sulfuric Acid 77% & Nitric Acid 70% | B | 2 |
| 46 | Toluene | A | 0 |
| 47 | Trichloroethylene | A | 0 |
| 48 | Xylene | A | 0 |
| 49 | Zinc Chloride, Saturated | B | 0 |

Tally of Results at each Level

| | Level 0 | Level 1 | Level 2 | Level 3 |
|-------------------------|----------------|----------------|----------------|----------------|
| Tally of Ratings | 25 | 7 | 16 | 1 |

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Final Result Picture



Conclusion: According to Section 2.1.2 of the SEFA 3 standard, with only 1 Level 3 final condition this wood surface should meet SEFA guidelines of no more than 4 Level 3 conditions. All results are for informational purposes only and should be confirmed through an accredited SEFA testing laboratory.

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