



**ADVANTAGE
SCIENTIFIC**
BY STEVENS

SEFA 8 TESTING

Structural Attribute &
Surface Finish Testing



SCIENTIFIC EQUIPMENT
& FURNITURE ASSOCIATION

ADVANTAGE-SCIENTIFIC.COM



For more examples, go to
ADVANTAGE-SCIENTIFIC.COM

Introduction 4-5

Structural Attribute Testing

| | |
|--|-----|
| What is Structural Attribute Testing?..... | 6 |
| Casework Group Overview | 6-7 |

Advantage Scientific 4120, 4400, 4700, 4800 Series Test Results..... 8-11

| | |
|--|----|
| 4.0 Base Cabinets | 8 |
| <i>Load Test, Concentrated Load Test, Torsion Test, Submersion Test</i> | |
| 5.0 Doors..... | 9 |
| <i>Hinge Test, Impact Test, Cycle Test</i> | |
| 6.0 Drawers..... | 10 |
| <i>Static Test, Drawer and Door Pull Test, Impact Test, Internal Rolling Impact Test, Cycle Test</i> | |
| 7.0 Shelving..... | 11 |
| <i>Load Test</i> | |
| 9.0 Wall, Counter Mounted and Tall Cabinets | 11 |
| <i>Load Test</i> | |
| 10.0 Tables | 11 |
| <i>Static Load Test, Racking Test</i> | |

Surface Finish Testing

| | |
|--------------------------------------|----|
| What is Surface Finish Testing?..... | 12 |
| Industry Comparison..... | 13 |

Test Results..... 14-19

| | |
|---|----|
| Advantage Scientific 4400 A-tech Series (Maple) | 14 |
| Advantage Scientific 4700/4800 Wood Veneer Series (Maple)..... | 15 |
| Advantage Scientific 4700/4800 Wood Veneer Series (Red Oak) | 16 |
| Advantage Scientific 4120 Laminate Series | 17 |
| Wood Finish (Competitor Brand) | 18 |
| Painted Metal Finish (Metal Casework Brand) | 19 |

All testing according to the SEFA Methods was completed by the independent third parties Universal Laboratory, Inc. and Cardinal Environmental, Inc., nationally recognized testing laboratories.



Advantage Scientific is proud to be a leader in the laboratory and science fields.

Passion for innovation spurs us to seek cutting-edge technology and continually design new products and solutions. Our proprietary A-tech Surface and our traditional Wood Veneer finishes have significant advantages for the lab environment and have been tested and approved by independent, SEFA approved labs.

All Advantage Scientific Casework has undergone SEFA 8 structural attribute testing, meeting or exceeding AWI requirements.*

All testing according to the SEFA Methods was completed by the independent third parties Universal Laboratory, Inc. and Cardinal Environmental, Inc., nationally recognized testing laboratories.



Ideally suited for the rigors of any laboratory environment... Advantage Scientific A-tech and Wood Veneer cabinetry.

A-tech SURFACE

4400 A-tech Series

- is Advantage Scientific engineered thermoset resin surface, embossed and thermofused in solid colors and woodgrain finishes simulating wood veneers.
- creates a non-porous, moisture-resistant face homogenous to the core, not susceptible to separation or delamination, and having moisture and chemical resistance.
- meets the requirements of Scientific Equipment and Furniture Association SEFA 8 Cabinet Surface Finish Tests (Section 8.1).
- demonstrates performance superior to typical wood finishes on the market.
- is ideal for educational and commercial laboratory environments.
- provides the look of wood veneer laboratory cabinets without the high cost.



Wood Veneer

4700/4800 Wood Veneer Series

- is designed to compete with other typical wood design products for science and laboratory environments.
- components individually flat line finished with UV cured stain, seal and top coatings.
- meets the requirements of Scientific Equipment and Furniture Association SEFA 8 Cabinet Surface Finish Tests (Section 8.1).
- is ideal for educational and commercial laboratory environments.
- provides highest quality and superior performance with competitive pricing.





Why is SEFA 8 testing important?

Scientific Equipment and Furniture Association (SEFA) was formed in 1988 to provide leadership in promoting quality and safety in the design, manufacture and utilization of laboratory furniture and equipment. SEFA has grown, evolved and positioned itself as the industry authority. Its members are among the world's largest and most highly respected manufacturers, architects and designers in the laboratory industry.

The most prominent of SEFA's initiatives is the publication of Recommended Practices for Laboratory Safety, which are intended to provide tools for evaluating the safety, durability and structural integrity of laboratory casework and complementary items.

Using SEFA 8 compliant cabinetry – Advantage Scientific 4400 A-tech Series or 4700/4800 Wood Veneer Series – in your science room or laboratory will ensure that you have the most durable finishes and structurally sound casework on the market today.



What is Structural Attribute Testing?

The structural integrity of a cabinet/casework product is verified by industry standard physical tests. The Architectural Woodwork Institute (AWI)* has adopted the Scientific Equipment and Furniture Association (SEFA) methods of testing for physical properties.

The results show that Advantage Scientific Casework meets or exceeds the performance values of the SEFA properties testing and, thus, meets the structural integrity performance requirements for AWI.*



Cabinets from each of the Advantage Scientific Casework Series, as well as laboratory tables, were tested. Test illustrations and results appear on pages 8-11.

4120 Laminate Series:

- 3mm Radius Edge Style Overlay Design Fronts
- HPL (high pressure laminate) Finished Fronts and Ends
- Flat (.020") PVC Cabinet Edgebanding
- Particleboard Core

4400 A-tech Series:

- 3mm Radius Edge Style Overlay Design Fronts
- A-tech Surfaces (woodgrains and solids)
- 3mm Radius PVC Cabinet Edgebanding
- Particleboard Core

4700 Wood Veneer Series:

- Wood Veneer Overlay Design Fronts, with 3mm Radius Wood Edges
- Matching Wood Veneer End Panels
- 3mm Radius Wood Cabinet Edges
- Plywood Core

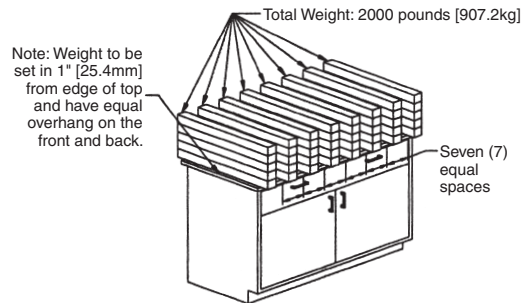
4800 Wood Veneer Series (AWI):

- Wood Veneer Overlay Design Fronts, with 3mm Radius Wood Edges
- Matching Wood Veneer End Panels
- 3mm Radius Wood Cabinet Edges
- Plywood Core

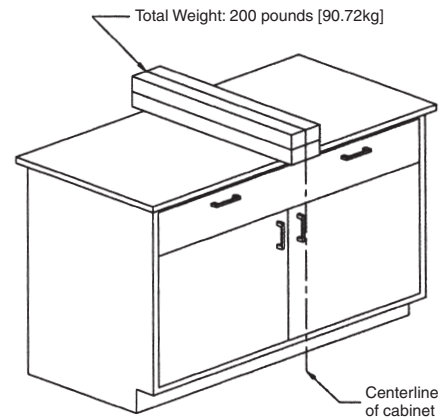
4.0 BASE CABINETS

| STRUCTURAL TESTING Base Cabinet 10440-483523 | ADVANTAGE SCIENTIFIC CASEWORK SERIES |
|---|---|
| X indicates compliance | 4120, 4400, 4700, 4800 |
| 4.2 Cabinet Load Test | X |
| 4.3 Cabinet Concentrated Load Test | X |
| 4.4 Cabinet Torsion Test | X |
| 4.5 Cabinet Submersion Test | X |

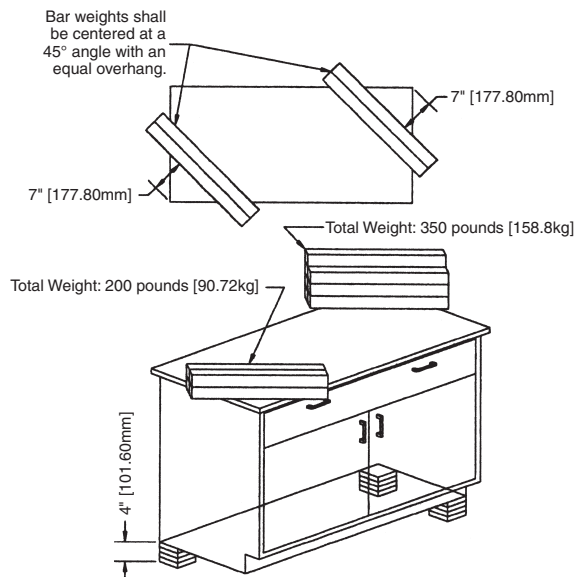
4120 Laminate Series
4400 A-Tech Series
4700 Wood Veneer Series
4800 Wood Veneer Series (AWI)



Cabinet Load Test Configuration



Base Cabinet Concentrated Load Test



Base Cabinet Torsion Test Procedure

The structural integrity of a cabinet/casework product is verified by industry standard physical tests. The Architectural Woodwork Institute (AWI)* has adopted the Scientific Equipment and Furniture Association (SEFA) methods of testing for physical properties.



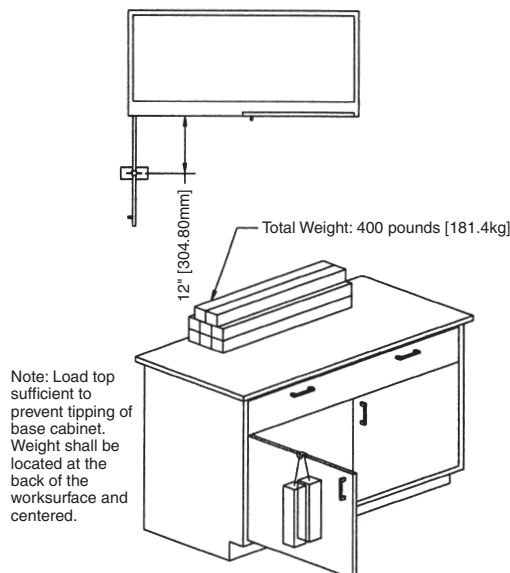
The results show that Advantage Scientific Casework meets or exceeds the performance values of the SEFA properties testing and, thus, meets the structural integrity performance requirements for AWI.*

5.0 DOORS

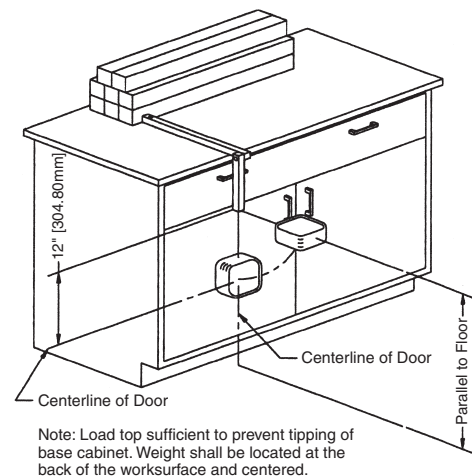
| STRUCTURAL TESTING Wall Cabinet 15129-483014 | ADVANTAGE SCIENTIFIC CASEWORK SERIES |
|---|---|
| X indicates compliance | 4120, 4400, 4700, 4800 |
| 5.1 Door Hinge Test | X |

4120 Laminate Series
4400 A-Tech Series
4700 Wood Veneer Series
4800 Wood Veneer Series (AWI)

| STRUCTURAL TESTING Base Cabinet 10440-483523 | ADVANTAGE SCIENTIFIC CASEWORK SERIES |
|--|---|
| X indicates compliance + indicates compliance may vary when door width exceeds height | 4120, 4400, 4700, 4800 |
| 5.1 Door Hinge Test | + |
| 5.2 Door Impact Test | X |
| 5.3 Door Cycle Test | X |



Base Cabinet Door Load Test
Configuration

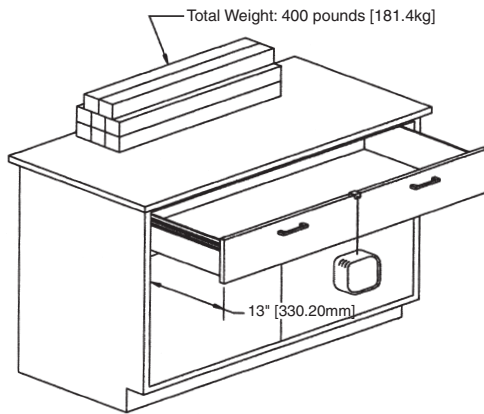


Base Cabinet Door Impact Test
Configuration

6.0 DRAWERS

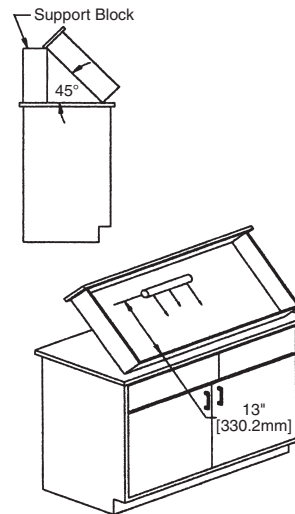
| STRUCTURAL TESTING Base Cabinet 10440-483523 | ADVANTAGE SCIENTIFIC CASEWORK SERIES |
|---|---|
| X indicates compliance | 4120, 4400, 4700, 4800 |
| 6.1 Drawer Static Test | X |
| 6.2 Drawer and Door Pull Test | X |
| 6.3 Drawer Impact Test | X |
| 6.4 Drawer Internal Rolling Impact Test | X |
| 6.5 Drawer Cycle Test (100# Load) | X |

4120 Laminate Series
4400 A-Tech Series
4700 Wood Veneer Series
4800 Wood Veneer Series (AWI)

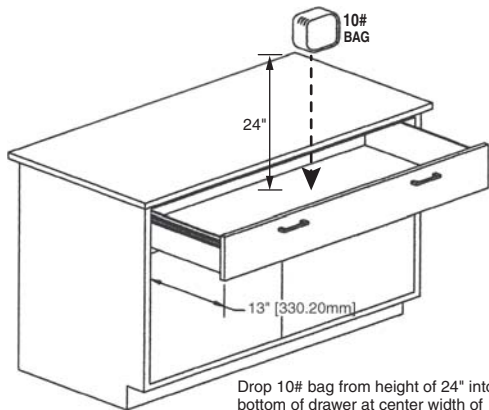


Note: Load top sufficient to prevent tipping of base cabinet. Weight shall be located at the back of the worksurface and centered.

Base Cabinet Drawer Static Load Test Configuration

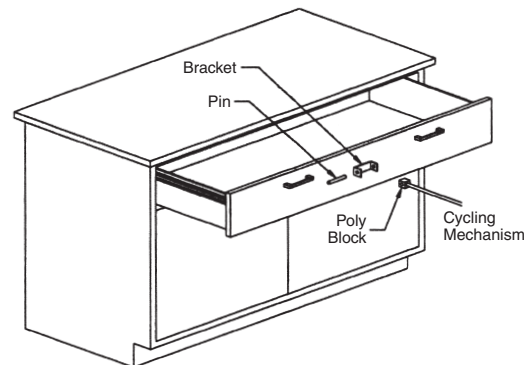


Base Cabinet Drawer Internal Rolling Impact Test Configuration



Drop 10# bag from height of 24" into bottom of drawer at center width of drawer and 6" back from inside face.

Base Cabinet Drawer Impact Test Configuration



Drawer Cycling Mechanism Test Configuration

The structural integrity of a cabinet/casework product is verified by industry standard physical tests. The Architectural Woodwork Institute (AWI)* has adopted the Scientific Equipment and Furniture Association (SEFA) methods of testing for physical properties.



The results show that Advantage Scientific Casework meets or exceeds the performance values of the SEFA properties testing and, thus, meets the structural integrity performance requirements for AWI.*

7.0 SHELVING

| STRUCTURAL TESTING Wall Cabinet 15129-483014 | ADVANTAGE SCIENTIFIC CASEWORK SERIES |
|---|---|
| X indicates compliance | 4120, 4400, 4700, 4800 |
| 7.1 Shelf Load Test | X |

4120 Laminate Series
4400 A-Tech Series
4700 Wood Veneer Series
4800 Wood Veneer Series (AWI)

| STRUCTURAL TESTING Base Cabinet 10440-483523 | ADVANTAGE SCIENTIFIC CASEWORK SERIES |
|---|---|
| X indicates compliance | 4120, 4400, 4700, 4800 |
| 7.1 Shelf Load Test | X |

9.0 WALL, COUNTER MOUNTED AND TALL CABINETS

| STRUCTURAL TESTING Wall Cabinet 15129-483014 | ADVANTAGE SCIENTIFIC CASEWORK SERIES |
|---|---|
| X indicates compliance | 4120, 4400, 4700, 4800 |
| 9.2 Load Test | X |

10.0 TABLES

| STRUCTURAL TESTING Table 60L x 24D x 36H | ADVANTAGE SCIENTIFIC TABLE SERIES | | |
|---|-----------------------------------|---------------------------|--------------------------|
| X indicates compliance | Steel Frame 49700 | Apron Steel Legs 49800 | Apron Wood Legs 49900 |
| 10.2 Table Static Load Test | X | X | X |
| 10.3 Table Racking Test | X | X | X |

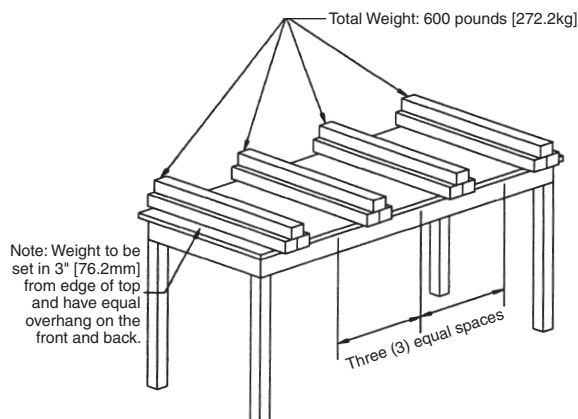


Table Static Load Test Configuration

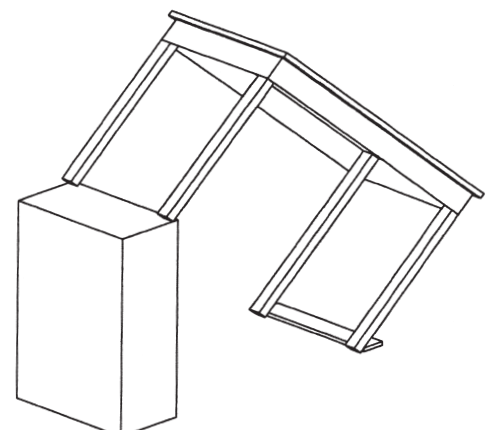


Table Racking Test Configuration

What is Surface Finish Testing?

8.0 CABINET SURFACE FINISH TESTS

8.1 CHEMICAL SPOT TEST

8.1.1 Purpose of Test

The purpose of the chemical spot test is to evaluate the resistance a finish has to chemical spills.

8.1.2 Test Procedure

Panels to be finished according to finishing supplier's guidelines and in accordance to casework manufacturer's standard procedures.

Obtain one sample panel measuring minimum 14" x 24" (355.6mm x 609.6mm). The received sample to be tested for chemical resistance as described herein.

Place panel on a flat surface, clean with soap 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 different chemical reagents by one of 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.

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

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.

| TEST NO. | CHEMICAL REAGENT | TEST METHOD |
|----------|--|-------------|
| 1. | Acetate, Amyl | A |
| 2. | Acetate, Ethyl | A |
| 3. | Acetic Acid, 98% | B |
| 4. | Acetone | A |
| 5. | Acid Dichromate, 5% | B |
| 6. | Alcohol, Butyl | A |
| 7. | Alcohol, Ethyl | A |
| 8. | Alcohol, Methyl | A |
| 9. | Ammonium Hydroxide, 28% | B |
| 10. | Benzene | A |
| 11. | Carbon Tetrachloride | A |
| 12. | Chloroform | A |
| 13. | Chromic Acid, 60% | B |
| 14. | Cresol | A |
| 15. | Dichloroacetic Acid | A |
| 16. | Dimethylformamide | A |
| 17. | Dioxane | A |
| 18. | Ethyl Ether | A |
| 19. | Formaldehyde, 37% | A |
| 20. | Formic Acid, 90% | B |
| 21. | Furfural | A |
| 22. | Gasoline | A |
| 23. | Hydrochloric Acid, 37% | B |
| 24. | Hydrofluoric Acid, 48% | B |
| 25. | Hydrogen Peroxide, 30% | B |
| 26. | Iodine, Tincture of | B |
| 27. | Methyl Ethyl Ketone | A |
| 28. | Methylene Chloride | A |
| 29. | Mono Chlorobenzene | A |
| 30. | Naphthalene | A |
| 31. | Nitric Acid, 20% | B |
| 32. | Nitric Acid, 30% | B |
| 33. | Nitric Acid, 70% | B |
| 34. | Phenol, 90% | A |
| 35. | Phosphoric Acid, 85% | B |
| 36. | Silver Nitrate, Saturated | B |
| 37. | Sodium Hydroxide, 10% | B |
| 38. | Sodium Hydroxide, 20% | B |
| 39. | Sodium Hydroxide, 40% | B |
| 40. | Sodium Hydroxide, Flake | B |
| 41. | Sodium Sulfide, Saturated | B |
| 42. | Sulfuric Acid, 33% | B |
| 43. | Sulfuric Acid, 77% | B |
| 44. | Sulfuric Acid, 96% | B |
| 45. | Sulfuric Acid (77%) and Nitric Acid (70%), equal parts | B |
| 46. | Toluene | A |
| 47. | Trichloroethylene | A |
| 48. | Xylene | A |
| 49. | Zinc Chloride, Saturated | B |

The resistance a finish has to chemical spills is evaluated by the SEFA 8.1 Chemical Spot Test, using forty nine different chemical reagents common to a typical laboratory environment. Laboratory-grade finishes should result in no more than four (4) Level 3 conditions.



Industry Comparison

The chart below shows how Advantage Scientific 4400 A-tech Series and 4700/4800 Wood Veneer Series finishes performed in these tests. The results show that Advantage Scientific 4400 A-tech Series and 4700/4800 Wood Veneer Series finishes qualify as laboratory-grade and demonstrate chemical resistance superior to finishes of other brands and competitors.

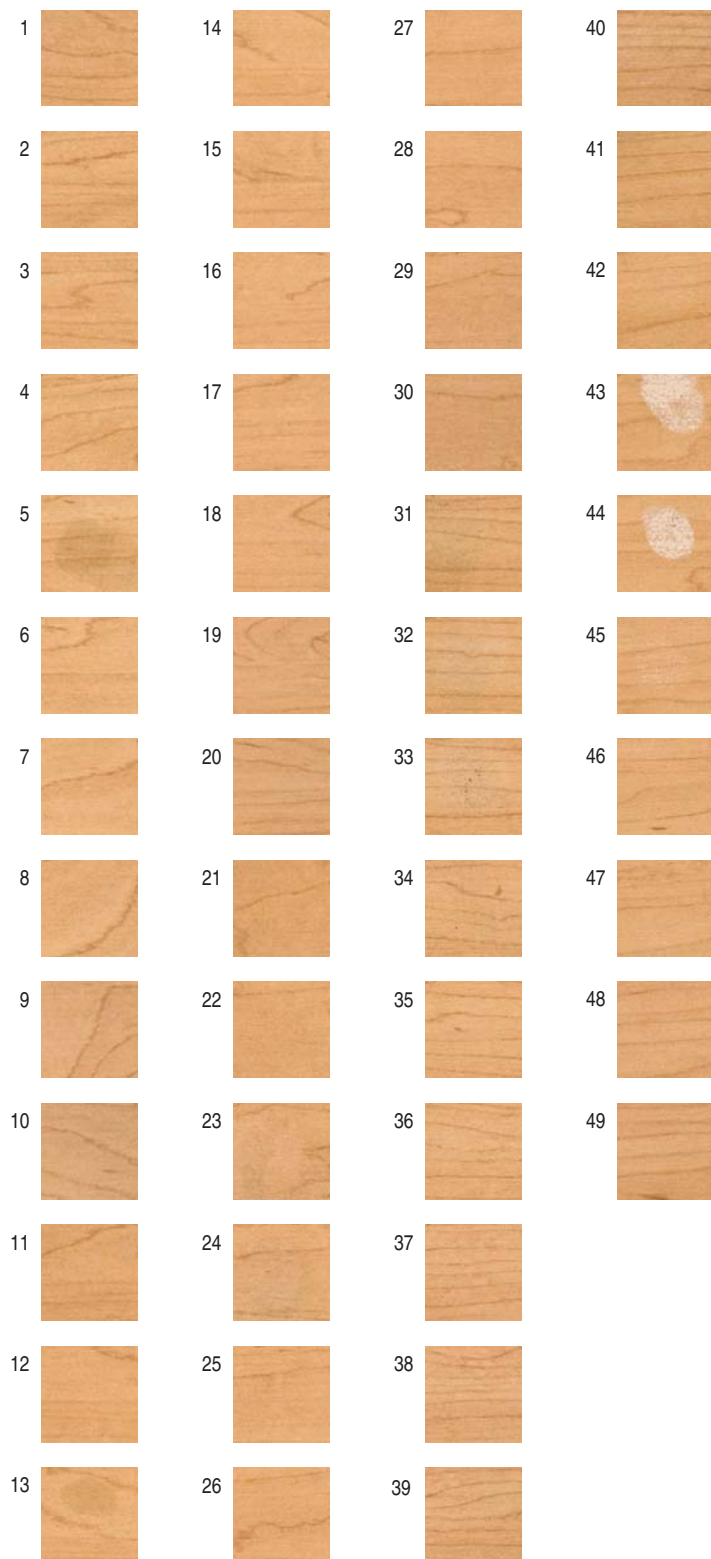
| DESCRIPTION OF FINISH | LEVELS | | | | |
|---|--------|----|---|---|------|
| | 0 | 1 | 2 | 3 | |
| Advantage Scientific 4400 A-tech Series (Maple) | 34 | 11 | 1 | 3 | = 49 |
| Advantage Scientific 4700/4800 Wood Veneer Series (Maple) | 29 | 17 | 3 | 0 | = 49 |
| Advantage Scientific 4700/4800 Wood Veneer Series (Red Oak) | 31 | 7 | 7 | 4 | = 49 |
| Advantage Scientific 4120 Laminate Series | 27 | 14 | 4 | 4 | = 49 |
| Wood Finish (Competitor Brand) | 26 | 18 | 0 | 5 | = 49 |
| Painted Metal Finish (Metal Casework Brand) | 26 | 5 | 9 | 9 | = 49 |

Laboratory-grade finishes should result in no more than four (4) Level 3 conditions.

SEFA 8 TESTING

Surface Finish Testing – 8.1 Chemical Spot Test

ADVANTAGE SCIENTIFIC 4400 A-TECH SERIES (MAPLE)



| TEST NO. | CHEMICAL REAGENT | TEST METHOD |
|----------|--|-------------|
| 1. | Acetate, Amyl | A |
| 2. | Acetate, Ethyl | A |
| 3. | Acetic Acid, 98% | B |
| 4. | Acetone | A |
| 5. | Acid Dichromate, 5% | B |
| 6. | Alcohol, Butyl | A |
| 7. | Alcohol, Ethyl | A |
| 8. | Alcohol, Methyl | A |
| 9. | Ammonium Hydroxide, 28% | B |
| 10. | Benzene | A |
| 11. | Carbon Tetrachloride | A |
| 12. | Chloroform | A |
| 13. | Chromic Acid, 60% | B |
| 14. | Cresol | A |
| 15. | Dichloroacetic Acid | A |
| 16. | Dimethylformamide | A |
| 17. | Dioxane | A |
| 18. | Ethyl Ether | A |
| 19. | Formaldehyde, 37% | A |
| 20. | Formic Acid, 90% | B |
| 21. | Furfural | A |
| 22. | Gasoline | A |
| 23. | Hydrochloric Acid, 37% | B |
| 24. | Hydrofluoric Acid, 48% | B |
| 25. | Hydrogen Peroxide, 30% | B |
| 26. | Iodine, Tincture of | B |
| 27. | Methyl Ethyl Ketone | A |
| 28. | Methylene Chloride | A |
| 29. | Mono Chlorobenzene | A |
| 30. | Naphthalene | A |
| 31. | Nitric Acid, 20% | B |
| 32. | Nitric Acid, 30% | B |
| 33. | Nitric Acid, 70% | B |
| 34. | Phenol, 90% | A |
| 35. | Phosphoric Acid, 85% | B |
| 36. | Silver Nitrate, Saturated | B |
| 37. | Sodium Hydroxide, 10% | B |
| 38. | Sodium Hydroxide, 20% | B |
| 39. | Sodium Hydroxide, 40% | B |
| 40. | Sodium Hydroxide, Flake | B |
| 41. | Sodium Sulfide, Saturated | B |
| 42. | Sulfuric Acid, 33% | B |
| 43. | Sulfuric Acid, 77% | B |
| 44. | Sulfuric Acid, 96% | B |
| 45. | Sulfuric Acid (77%) and Nitric Acid (70%), equal parts | B |
| 46. | Toluene | A |
| 47. | Trichloroethylene | A |
| 48. | Xylene | A |
| 49. | Zinc Chloride, Saturated | B |

Chemical 49 Tests

| Levels - | 0 | 1 | 2 | 3 | |
|-----------|----|----|---|---|------|
| Results - | 34 | 11 | 1 | 3 | = 49 |

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.

The resistance a finish has to chemical spills is evaluated by the SEFA 8.1 Chemical Spot Test, using forty nine different chemical reagents common to a typical laboratory environment. Laboratory-grade finishes should result in no more than four (4) Level 3 conditions.



ADVANTAGE SCIENTIFIC 4700/4800 WOOD VENEER SERIES (MAPLE)

| | | | | | | | |
|----|--|----|--|----|--|----|--|
| 1 | | 14 | | 27 | | 40 | |
| 2 | | 15 | | 28 | | 41 | |
| 3 | | 16 | | 29 | | 42 | |
| 4 | | 17 | | 30 | | 43 | |
| 5 | | 18 | | 31 | | 44 | |
| 6 | | 19 | | 32 | | 45 | |
| 7 | | 20 | | 33 | | 46 | |
| 8 | | 21 | | 34 | | 47 | |
| 9 | | 22 | | 35 | | 48 | |
| 10 | | 23 | | 36 | | 49 | |
| 11 | | 24 | | 37 | | | |
| 12 | | 25 | | 38 | | | |
| 13 | | 26 | | 39 | | | |

| TEST NO. | CHEMICAL REAGENT | TEST METHOD |
|----------|--|-------------|
| 1. | Acetate, Amyl | A |
| 2. | Acetate, Ethyl | A |
| 3. | Acetic Acid, 98% | B |
| 4. | Acetone | A |
| 5. | Acid Dichromate, 5% | B |
| 6. | Alcohol, Butyl | A |
| 7. | Alcohol, Ethyl | A |
| 8. | Alcohol, Methyl | A |
| 9. | Ammonium Hydroxide, 28% | B |
| 10. | Benzene | A |
| 11. | Carbon Tetrachloride | A |
| 12. | Chloroform | A |
| 13. | Chromic Acid, 60% | B |
| 14. | Cresol | A |
| 15. | Dichloroacetic Acid | A |
| 16. | Dimethylformamide | A |
| 17. | Dioxane | A |
| 18. | Ethyl Ether | A |
| 19. | Formaldehyde, 37% | A |
| 20. | Formic Acid, 90% | B |
| 21. | Furfural | A |
| 22. | Gasoline | A |
| 23. | Hydrochloric Acid, 37% | B |
| 24. | Hydrofluoric Acid, 48% | B |
| 25. | Hydrogen Peroxide, 30% | B |
| 26. | Iodine, Tincture of | B |
| 27. | Methyl Ethyl Ketone | A |
| 28. | Methylene Chloride | A |
| 29. | Mono Chlorobenzene | A |
| 30. | Naphthalene | A |
| 31. | Nitric Acid, 20% | B |
| 32. | Nitric Acid, 30% | B |
| 33. | Nitric Acid, 70% | B |
| 34. | Phenol, 90% | A |
| 35. | Phosphoric Acid, 85% | B |
| 36. | Silver Nitrate, Saturated | B |
| 37. | Sodium Hydroxide, 10% | B |
| 38. | Sodium Hydroxide, 20% | B |
| 39. | Sodium Hydroxide, 40% | B |
| 40. | Sodium Hydroxide, Flake | B |
| 41. | Sodium Sulfide, Saturated | B |
| 42. | Sulfuric Acid, 33% | B |
| 43. | Sulfuric Acid, 77% | B |
| 44. | Sulfuric Acid, 96% | B |
| 45. | Sulfuric Acid (77%) and Nitric Acid (70%), equal parts | B |
| 46. | Toluene | A |
| 47. | Trichloroethylene | A |
| 48. | Xylene | A |
| 49. | Zinc Chloride, Saturated | B |

Chemical 49 Tests

| Levels - | 0 | 1 | 2 | 3 | |
|-----------|----|----|---|---|------|
| Results - | 29 | 17 | 3 | 0 | = 49 |

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.

ADVANTAGE SCIENTIFIC 4700/4800 WOOD VENEER SERIES (RED OAK)



| TEST NO. | CHEMICAL REAGENT | TEST METHOD |
|----------|--|-------------|
| 1. | Acetate, Amyl | A |
| 2. | Acetate, Ethyl | A |
| 3. | Acetic Acid, 98% | B |
| 4. | Acetone | A |
| 5. | Acid Dichromate, 5% | B |
| 6. | Alcohol, Butyl | A |
| 7. | Alcohol, Ethyl | A |
| 8. | Alcohol, Methyl | A |
| 9. | Ammonium Hydroxide, 28% | B |
| 10. | Benzene | A |
| 11. | Carbon Tetrachloride | A |
| 12. | Chloroform | A |
| 13. | Chromic Acid, 60% | B |
| 14. | Cresol | A |
| 15. | Dichloroacetic Acid | A |
| 16. | Dimethylformamide | A |
| 17. | Dioxane | A |
| 18. | Ethyl Ether | A |
| 19. | Formaldehyde, 37% | A |
| 20. | Formic Acid, 90% | B |
| 21. | Furfural | A |
| 22. | Gasoline | A |
| 23. | Hydrochloric Acid, 37% | B |
| 24. | Hydrofluoric Acid, 48% | B |
| 25. | Hydrogen Peroxide, 30% | B |
| 26. | Iodine, Tincture of | B |
| 27. | Methyl Ethyl Ketone | A |
| 28. | Methylene Chloride | A |
| 29. | Mono Chlorobenzene | A |
| 30. | Naphthalene | A |
| 31. | Nitric Acid, 20% | B |
| 32. | Nitric Acid, 30% | B |
| 33. | Nitric Acid, 70% | B |
| 34. | Phenol, 90% | A |
| 35. | Phosphoric Acid, 85% | B |
| 36. | Silver Nitrate, Saturated | B |
| 37. | Sodium Hydroxide, 10% | B |
| 38. | Sodium Hydroxide, 20% | B |
| 39. | Sodium Hydroxide, 40% | B |
| 40. | Sodium Hydroxide, Flake | B |
| 41. | Sodium Sulfide, Saturated | B |
| 42. | Sulfuric Acid, 33% | B |
| 43. | Sulfuric Acid, 77% | B |
| 44. | Sulfuric Acid, 96% | B |
| 45. | Sulfuric Acid (77%) and Nitric Acid (70%), equal parts | B |
| 46. | Toluene | A |
| 47. | Trichloroethylene | A |
| 48. | Xylene | A |
| 49. | Zinc Chloride, Saturated | B |

Chemical 49 Tests

| Levels - | 0 | 1 | 2 | 3 | |
|-----------|----|---|---|---|------|
| Results - | 31 | 7 | 7 | 4 | = 49 |

Level 0 - No detectable change.

Level 1 - Slight change in color or gloss.

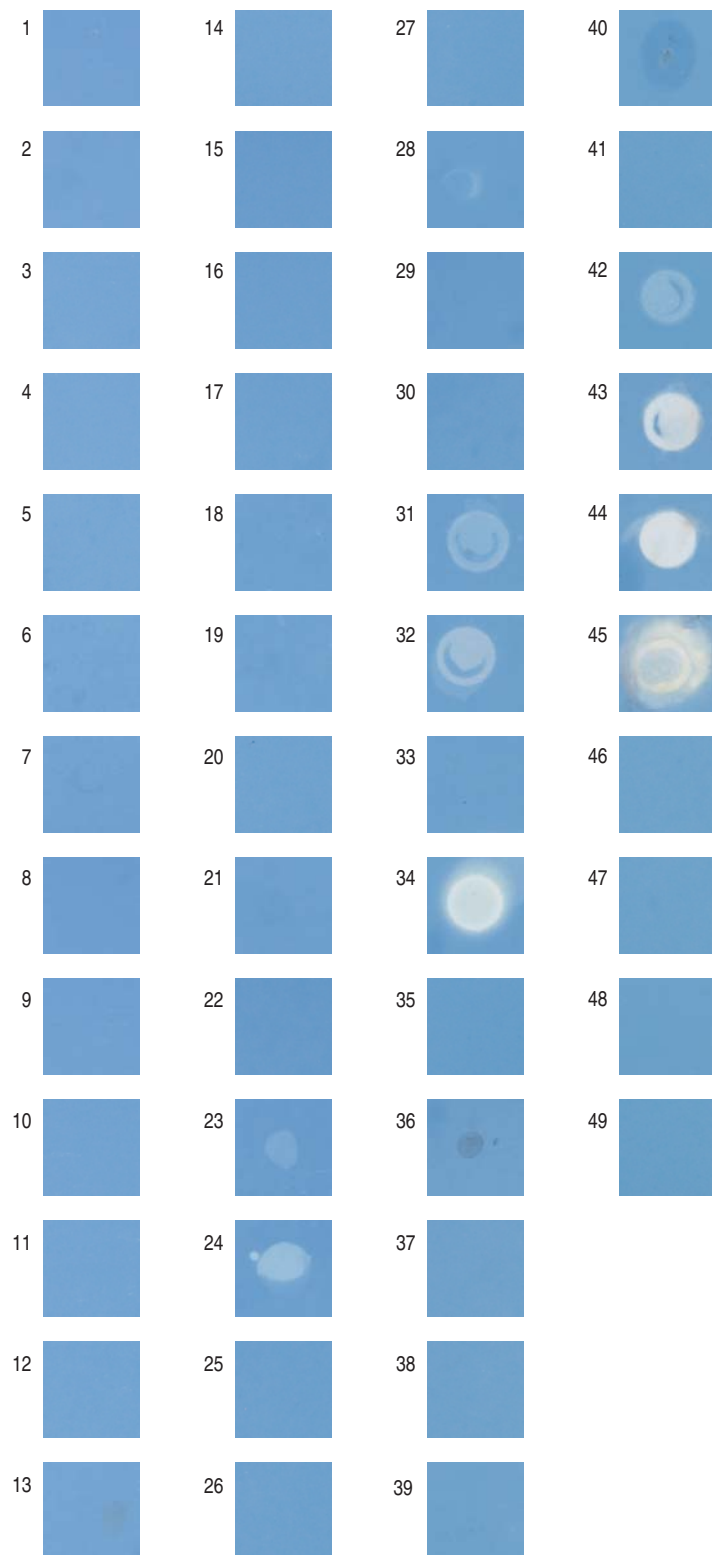
Level 2 - Slight surface etching or severe staining.

Level 3 - Pitting, cratering, swelling, or erosion of coating.
Obvious and significant deterioration.

The resistance a finish has to chemical spills is evaluated by the SEFA 8.1 Chemical Spot Test, using forty nine different chemical reagents common to a typical laboratory environment. Laboratory-grade finishes should result in no more than four (4) Level 3 conditions.



ADVANTAGE SCIENTIFIC 4120 LAMINATE SERIES



| TEST NO. | CHEMICAL REAGENT | TEST METHOD |
|----------|--|-------------|
| 1. | Acetate, Amyl | A |
| 2. | Acetate, Ethyl | A |
| 3. | Acetic Acid, 98% | B |
| 4. | Acetone | A |
| 5. | Acid Dichromate, 5% | B |
| 6. | Alcohol, Butyl | A |
| 7. | Alcohol, Ethyl | A |
| 8. | Alcohol, Methyl | A |
| 9. | Ammonium Hydroxide, 28% | B |
| 10. | Benzene | A |
| 11. | Carbon Tetrachloride | A |
| 12. | Chloroform | A |
| 13. | Chromic Acid, 60% | B |
| 14. | Cresol | A |
| 15. | Dichloroacetic Acid | A |
| 16. | Dimethylformamide | A |
| 17. | Dioxane | A |
| 18. | Ethyl Ether | A |
| 19. | Formaldehyde, 37% | A |
| 20. | Formic Acid, 90% | B |
| 21. | Furfural | A |
| 22. | Gasoline | A |
| 23. | Hydrochloric Acid, 37% | B |
| 24. | Hydrofluoric Acid, 48% | B |
| 25. | Hydrogen Peroxide, 30% | B |
| 26. | Iodine, Tincture of | B |
| 27. | Methyl Ethyl Ketone | A |
| 28. | Methylene Chloride | A |
| 29. | Mono Chlorobenzene | A |
| 30. | Naphthalene | A |
| 31. | Nitric Acid, 20% | B |
| 32. | Nitric Acid, 30% | B |
| 33. | Nitric Acid, 70% | B |
| 34. | Phenol, 90% | A |
| 35. | Phosphoric Acid, 85% | B |
| 36. | Silver Nitrate, Saturated | B |
| 37. | Sodium Hydroxide, 10% | B |
| 38. | Sodium Hydroxide, 20% | B |
| 39. | Sodium Hydroxide, 40% | B |
| 40. | Sodium Hydroxide, Flake | B |
| 41. | Sodium Sulfide, Saturated | B |
| 42. | Sulfuric Acid, 33% | B |
| 43. | Sulfuric Acid, 77% | B |
| 44. | Sulfuric Acid, 96% | B |
| 45. | Sulfuric Acid (77%) and Nitric Acid (70%), equal parts | B |
| 46. | Toluene | A |
| 47. | Trichloroethylene | A |
| 48. | Xylene | A |
| 49. | Zinc Chloride, Saturated | B |

Chemical 49 Tests

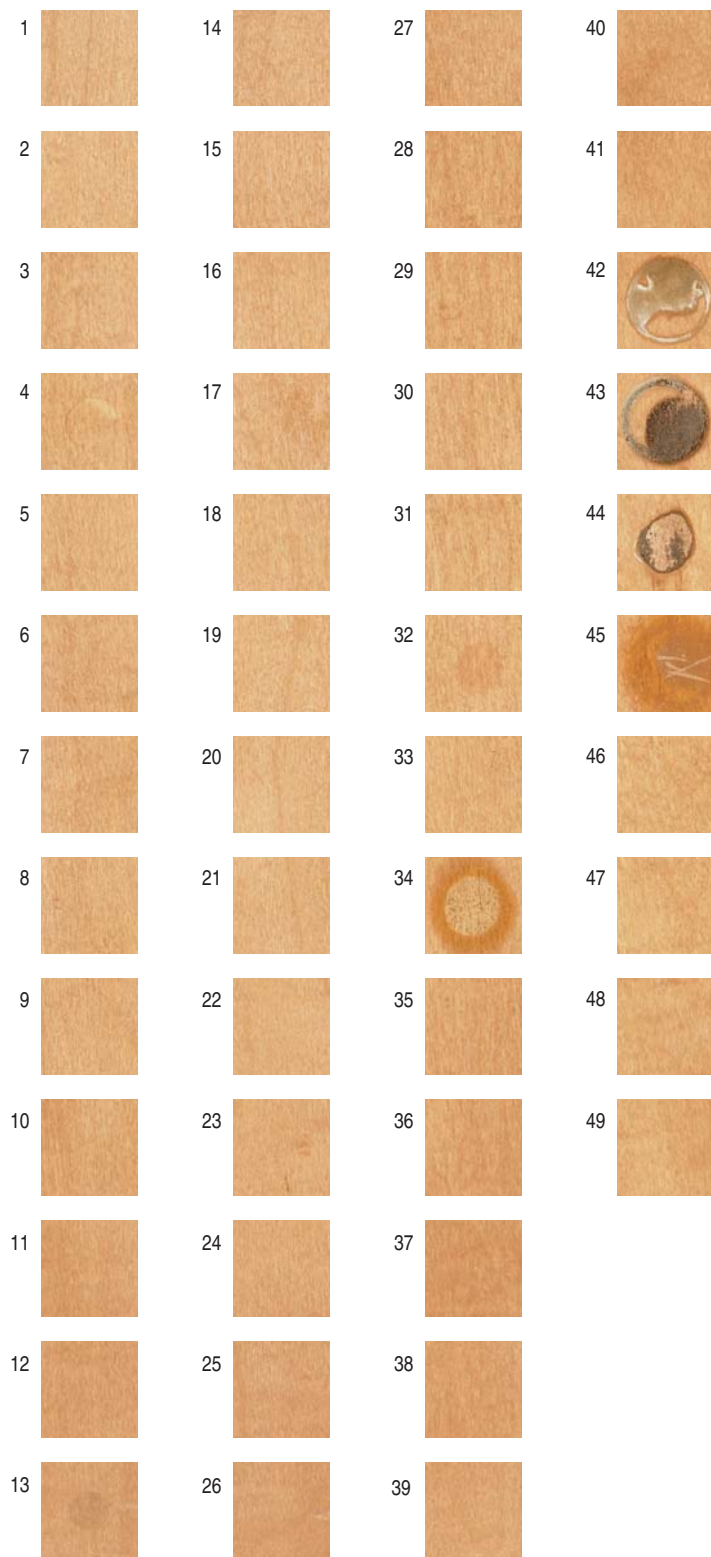
| Levels - | 0 | 1 | 2 | 3 | |
|-----------|----|----|---|---|------|
| Results - | 27 | 14 | 4 | 4 | = 49 |

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.

SEFA 8 TESTING

Surface Finish Testing – 8.1 Chemical Spot Test

WOOD FINISH (COMPETITOR BRAND)



| TEST NO. | CHEMICAL REAGENT | TEST METHOD |
|----------|--|-------------|
| 1. | Acetate, Amyl | A |
| 2. | Acetate, Ethyl | A |
| 3. | Acetic Acid, 98% | B |
| 4. | Acetone | A |
| 5. | Acid Dichromate, 5% | B |
| 6. | Alcohol, Butyl | A |
| 7. | Alcohol, Ethyl | A |
| 8. | Alcohol, Methyl | A |
| 9. | Ammonium Hydroxide, 28% | B |
| 10. | Benzene | A |
| 11. | Carbon Tetrachloride | A |
| 12. | Chloroform | A |
| 13. | Chromic Acid, 60% | B |
| 14. | Cresol | A |
| 15. | Dichloroacetic Acid | A |
| 16. | Dimethylformamide | A |
| 17. | Dioxane | A |
| 18. | Ethyl Ether | A |
| 19. | Formaldehyde, 37% | A |
| 20. | Formic Acid, 90% | B |
| 21. | Furfural | A |
| 22. | Gasoline | A |
| 23. | Hydrochloric Acid, 37% | B |
| 24. | Hydrofluoric Acid, 48% | B |
| 25. | Hydrogen Peroxide, 30% | B |
| 26. | Iodine, Tincture of | B |
| 27. | Methyl Ethyl Ketone | A |
| 28. | Methylene Chloride | A |
| 29. | Mono Chlorobenzene | A |
| 30. | Naphthalene | A |
| 31. | Nitric Acid, 20% | B |
| 32. | Nitric Acid, 30% | B |
| 33. | Nitric Acid, 70% | B |
| 34. | Phenol, 90% | A |
| 35. | Phosphoric Acid, 85% | B |
| 36. | Silver Nitrate, Saturated | B |
| 37. | Sodium Hydroxide, 10% | B |
| 38. | Sodium Hydroxide, 20% | B |
| 39. | Sodium Hydroxide, 40% | B |
| 40. | Sodium Hydroxide, Flake | B |
| 41. | Sodium Sulfide, Saturated | B |
| 42. | Sulfuric Acid, 33% | B |
| 43. | Sulfuric Acid, 77% | B |
| 44. | Sulfuric Acid, 96% | B |
| 45. | Sulfuric Acid (77%) and Nitric Acid (70%), equal parts | B |
| 46. | Toluene | A |
| 47. | Trichloroethylene | A |
| 48. | Xylene | A |
| 49. | Zinc Chloride, Saturated | B |

Chemical 49 Tests

| Levels - | 0 | 1 | 2 | 3 | |
|-----------|----|----|---|---|------|
| Results - | 26 | 18 | 0 | 5 | = 49 |

Level 0 - No detectable change.

Level 1 - Slight change in color or gloss.

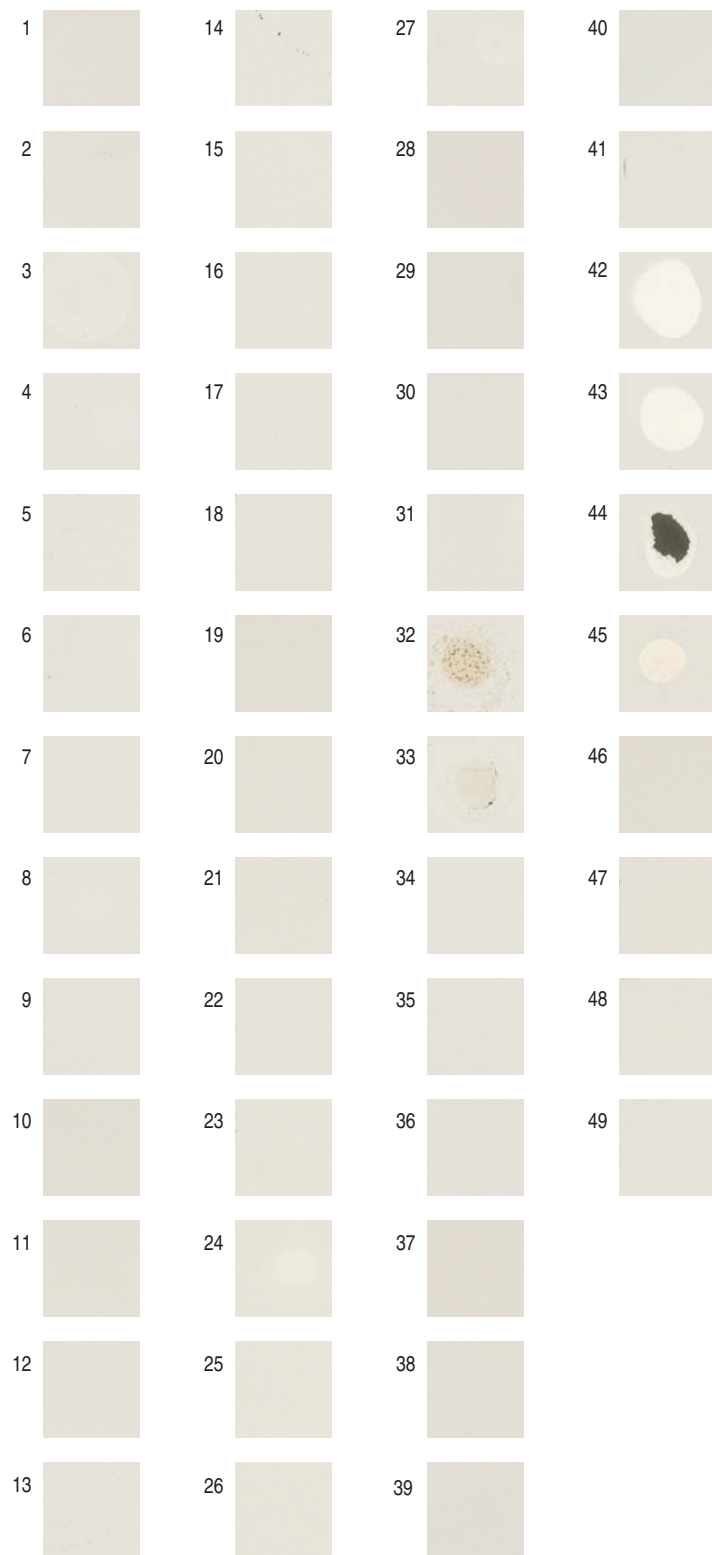
Level 2 - Slight surface etching or severe staining.

Level 3 - Pitting, cratering, swelling, or erosion of coating. Obvious and significant deterioration.

The resistance a finish has to chemical spills is evaluated by the SEFA 8.1 Chemical Spot Test, using forty nine different chemical reagents common to a typical laboratory environment. Laboratory-grade finishes should result in no more than four (4) Level 3 conditions.



PAINTED METAL FINISH (METAL CASEWORK BRAND)



| TEST NO. | CHEMICAL REAGENT | TEST METHOD |
|----------|--|-------------|
| 1. | Acetate, Amyl | A |
| 2. | Acetate, Ethyl | A |
| 3. | Acetic Acid, 98% | B |
| 4. | Acetone | A |
| 5. | Acid Dichromate, 5% | B |
| 6. | Alcohol, Butyl | A |
| 7. | Alcohol, Ethyl | A |
| 8. | Alcohol, Methyl | A |
| 9. | Ammonium Hydroxide, 28% | B |
| 10. | Benzene | A |
| 11. | Carbon Tetrachloride | A |
| 12. | Chloroform | A |
| 13. | Chromic Acid, 60% | B |
| 14. | Cresol | A |
| 15. | Dichloroacetic Acid | A |
| 16. | Dimethylformamide | A |
| 17. | Dioxane | A |
| 18. | Ethyl Ether | A |
| 19. | Formaldehyde, 37% | A |
| 20. | Formic Acid, 90% | B |
| 21. | Furfural | A |
| 22. | Gasoline | A |
| 23. | Hydrochloric Acid, 37% | B |
| 24. | Hydrofluoric Acid, 48% | B |
| 25. | Hydrogen Peroxide, 30% | B |
| 26. | Iodine, Tincture of | B |
| 27. | Methyl Ethyl Ketone | A |
| 28. | Methylene Chloride | A |
| 29. | Mono Chlorobenzene | A |
| 30. | Naphthalene | A |
| 31. | Nitric Acid, 20% | B |
| 32. | Nitric Acid, 30% | B |
| 33. | Nitric Acid, 70% | B |
| 34. | Phenol, 90% | A |
| 35. | Phosphoric Acid, 85% | B |
| 36. | Silver Nitrate, Saturated | B |
| 37. | Sodium Hydroxide, 10% | B |
| 38. | Sodium Hydroxide, 20% | B |
| 39. | Sodium Hydroxide, 40% | B |
| 40. | Sodium Hydroxide, Flake | B |
| 41. | Sodium Sulfide, Saturated | B |
| 42. | Sulfuric Acid, 33% | B |
| 43. | Sulfuric Acid, 77% | B |
| 44. | Sulfuric Acid, 96% | B |
| 45. | Sulfuric Acid (77%) and Nitric Acid (70%), equal parts | B |
| 46. | Toluene | A |
| 47. | Trichloroethylene | A |
| 48. | Xylene | A |
| 49. | Zinc Chloride, Saturated | B |

Chemical 49 Tests

| Levels - | 0 | 1 | 2 | 3 |
|-----------|----|---|---|--------|
| Results - | 26 | 5 | 9 | 9 = 49 |

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.



704 WEST MAIN STREET
TEUTOPOLIS, IL 62467
P: 217.857.7100
F: 217.857.7101

217.857.7100
ADVANTAGE-SCIENTIFIC.COM