



**SHERWIN  
WILLIAMS.**

# Chemical Coatings

CC-F55

## SHER-WOOD® KemVar® LF Water White Conversion Varnish

Bright Rubbed Effect ..... V84F96  
 Medium Rubbed Effect ..... V84F97  
 Flat ..... V84F98  
 Catalyst ..... V66V21

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p><b>SHER-WOOD® KemVar® LF Water White Conversion Varnish</b> is a low formaldehyde water white conversion varnish for coating interior wood products. As packaged, Water White LF is a HAPS Free and VOC compliant formulation. Water White LF is a pale, clear, catalyzed coating material for finishing natural woods, pickled finishes, and other applications requiring good resistance to discoloration and yellowing. Water White LF offers superior performance properties for kitchen cabinetry, office and institution furniture, and other finished products requiring the benefits of a premium catalyzed coating system.</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• <b>Water white formulation containing UV Absorber for enhanced non-yellowing properties</b></li> <li>• No reportable formaldehyde</li> <li>• HAPS FREE as packaged (as defined by the National Standards for Hazardous Air Pollutants [HAPS] Emissions for Wood Furniture Manufacturing Operations 40 CFR 63, Subpart JJ)</li> <li>• Meets the Federal Control Technique Guidelines (CTG) for VOC for conversion varnishes</li> <li>• Meets the test requirements of the Kitchen Cabinet Manufacturers Association (KCMA)</li> <li>• Use as a multicoat, self-seal system or over vinyl sealer</li> <li>• High build and good verticle hang characteristics</li> <li>• Production line drying characteristics for faster dry-to-sand times and early hardness development</li> <li>• Good moisture, household chemical and cold check resistance</li> </ul>	<p><b>Gloss Levels:</b> (Measured on black glass)</p> <p>BRE - 55-60 units  MRE - 34-38 units  Flat - 3-8 units</p> <p><b>Weight Solids:</b> 36.9 ± 2%  <b>Volume Solids:</b> 29 ± 1%  <b>Viscosity @ 77°F:</b> 24-28 seconds #2 Zahn Cup</p> <p><b>Recommended film thickness per coat:</b>  Mils Wet - 3.0-5.0 Mils Dry - 0.8-1.4</p> <p><b>Spreading Rate</b> (no application loss)  @ 1.0 mil dft: 465 sq ft/gal</p> <p><b>Drying (77°F, 50% RH):</b></p> <p>To Touch: 10-15 minutes  To Handle: 20-30 minutes  To Sand: 20-45 minutes  To Recoat: 30-45 minutes  To Rub: 8 hours  To Pack: 8 hours</p> <p><b>Force Drying:</b></p> <p>Flash: 10 minutes  Bake: 15 minutes @125°F  Air dry 2 hours before packing.</p> <p>Application environment, staining system, and wet coating mils, all influence drying. Listed drying schedules are provided as general guidelines.</p> <p><b>Flash Point:</b> 4°F Pensky-Martens Closed Cup</p> <p><b>Mixing Ratio:</b></p> <p>1 Gal KemVar LF Varnish  4 oz. V66V21 catalyst</p> <p>Reduce as needed.</p> <p><b>Pot Life:</b> 24 hours</p> <p><b>Decatalyzation Procedure:</b></p> <p>Dilute catalyzed material 100% with uncatalyzed material. This will stabilize the material overnight or for 16 hours. Add catalyst for only the uncatalyzed volume the next day. Do not save catalyzed material over the weekend.</p> <p><b>Package Life:</b> 1 year, unopened</p> <p><b>Air Quality Data:</b></p> <p>Non-photochemically reactive Volatile Organic Compounds (VOC) as packaged, maximum  4.94 lb/gal, 557 g/L  1.58 lbs VOC/lb solids</p> <p>Hazardous Air Pollutants (HAPS) as packaged:  0.00 lbs/lb solids</p> <p>An Environmental Data Sheet is available from your local Sherwin-Williams facility</p>	<p><b>Wood</b> (interior only): Must be clean, dry, and finish sanded. Substrate should be free of grease, oil, dirt, fingerprints, and any contamination to ensure optimum adhesion and coating performance properties.</p> <p>Moisture content of wood should be 6 to 8%.</p> <p><b>Testing:</b> Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.</p> <p><b>Finishing System:</b></p> <ol style="list-style-type: none"> <li>1. Color Wood - Stain or tone as desired and dry thoroughly.</li> <li>2. Seal - Apply KemVar LF as a sealer or use vinyl sealers (catalyzed): T67F3, T67F5, T67F6 or T67F7. See Product Data Sheets on these sealers for details.</li> <li>3. Air dry 30 minutes, sand seal coat with 240 grit or equivalent, remove sanding dust.</li> <li>4. Topcoat - Apply KemVar LF at 3.0 - 5.0 mils wet.</li> <li>5. For more depth or build apply an additional coat. Do not exceed 4.0 mils dft for the total system.</li> </ol>

## APPLICATION

### **Conventional Spray:**

Air Pressure ..... 40-50 psi  
Fluid Pressure ..... 6-8 psi

### **Airless Spray:**

Pressure ..... 1200-1800 psi  
Tip ..... .011-.015"

### **Air Assisted Airless:**

Assist Air Pressure ..... 10-25 psi  
Fluid Pressure ..... 400-800 psi  
Cap/Tip ..... .011-.015"

### **HVLP:**

Air Pressure ..... 4-9 psi  
Fluid Pressure ..... 10-12 psi

### **Cleanup:**

Clean tools/equipment immediately after use with R7K305, Lacquer Thinner R7K320 or Butyl Acetate R6K18.

### **REDUCING OPTIONS**

Reduce 5-20% with listed solvents to adjust drying and or build.

R6K9 ..... Acetone  
R6K18 ..... Butyl Acetate  
R7K305 ..... Lacquer Thinner

### **RETARDING OPTIONS**

Retard 5-10% with listed solvents.

R6K30 ..... MAK  
R6K35 ..... EEP

## SPECIFICATIONS

### **Performance Tests:**

Cold Check Resistance ..... 20 cycles  
Print Resistance ..... No print  
18 hours air dry, at 2 psi at 77°F in direct contact with 8 oz. duck cloth.

Detergent/Water Resistance

Edge Soak Test ..... no film failure  
Minimum of 2.0 dry mils, cured 10 days at 77°F

### **Household Chemicals Test**

Panels were aged 30 days at 77°F, 5 drops of each item were placed under a watch glass for one hour. Film was rinsed with water, washed with warm water and soap, dried, and wiped with VM&P Naphtha to remove items not removed with water.

Household Ammonia ..... no visual effect  
Vinegar ..... no visual effect  
Lipstick ..... no visual effect  
Lemon Juice ..... no visual effect  
50% Ethyl Alcohol ..... no visual effect  
Mercurochrome 2% ..... no visual effect  
Red Ink ..... no visual effect  
Washable Blue Ink ..... no visual effect  
Mustard ..... very slight stain  
Oil Base Paint ..... no visual effect  
Latex Emulsion Paint ..... no visual effect  
VM&P Naphtha ..... no visual effect  
Turpentine ..... no visual effect  
Orange Crayon ..... no visual effect  
Mayonnaise ..... no visual effect  
10% Sodium Carbonate ..... no visual effect  
Sour Milk ..... no visual effect  
Margarine ..... no visual effect  
Butter ..... no visual effect  
Water ..... no visual effect  
Cooking fat ..... no visual effect

## SPECIFICATIONS

### **Product Limitations:**

- Sher-Wood® KemVar® LF Varnish must be catalyzed 4 ounces per gallon with Sher-Wood® KemVar® Catalyst V66V21. Do not overcatalyze. Do not use any other catalyst.
- KemVar® Catalyst V66V21 is an acid. To prevent acid corrosion and pitting, all equipment should be made of stainless steel. Containers and piping should be stainless steel or plastic.
- For interior use only.
- To extend the pot life at the end of the day, add 100% of uncatalyzed material. The next day, add catalyst based only on the uncatalyzed portion when ready to use .
- Temperature must be above 60°F during application and cure to ensure acceptable coating properties. Coatings cured at lower temperatures are prone to cracking, checking and brittleness.
- Non-yellowing is relative, not absolute terminology. This quality formulation provides UV resistance superior to most standard type nitrocellulose containing precatalyzed lacquers, CAB Acrylic lacquers and Water White varnishes that do not contain UV absorbers.
- To achieve optimum film properties a minimum of 2.0 mils DFT is required.
- Maximum dry film thickness must not exceed 4.0 mils, heavier films may crack.
- If a repair coat is necessary, further reduce the material to keep the total DFT at 4.0 mils or less.

## CAUTIONS

### **FOR INDUSTRIAL SHOP APPLICATION**

Thoroughly review product label for safety and cautions prior to using this product.

A Material Safety Data Sheet is available from your local Sherwin-Williams facility.

Please direct any questions or comments to your local Sherwin-Williams facility.

**Note:** Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.