



**SHERWIN  
WILLIAMS.**

# Chemical Coatings

CC-F45

## SHER-WOOD® Compliant Water White Conversion Varnish

Bright Rubbed Effect ..... V84F86  
 Medium Rubbed Effect ..... V84F87  
 Dull Rubbed Effect ..... V84F88  
 Catalyst ..... V66V21

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p><b>SHER-WOOD® Compliant Water White Conversion Varnish</b> is a low HAPS/VOC complying catalyzed wood finishing system providing water white color and excellent non-yellowing properties. It is recommended for use over white "pickled" and light color stains where non-yellowing is required. Water White Conversion Varnish offers superior performance properties for institutional and office furniture, cabinets and interior wood products.</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Water white color</li> <li>• Excellent resistance to yellowing</li> <li>• Meets the Federal HAPS standard for wood finishes*</li> <li>• Meets the Federal Control Technique Guidelines (CTG) for VOC for conversion varnishes</li> <li>• High build - 34% volume solids</li> <li>• Fast drying</li> <li>• Meets the test requirements of the Kitchen Cabinet Manufacturers' Association (KCMA)</li> <li>• Self sealing - use the same product as a sealer</li> <li>• Will not blush like lacquer products.</li> <li>• Process efficient - many three coat applications can be done in two coats because of its high solids and high build</li> <li>• Versatile - may be applied by conventional, airless, air assisted airless or electrostatic spray</li> <li>• Good "hang" on vertical surfaces</li> <li>• Excellent toughness and mar resistance</li> <li>• Excellent moisture resistance</li> <li>• Excellent resistance to household chemicals</li> <li>• Excellent cold check resistance</li> <li>• Ideal for kitchen cabinets, vanities, chairs, office furniture, and a wide range of interior wood products</li> </ul> <p>*National Standards for Hazardous Emissions for Wood Furniture Manufacturing Operations, CFR 40, Part 63, Subpart JJ.</p>	<p><b>Gloss:</b> V84F86 BRE (55-60 units)          V84F87 MRE (34-38 units)          V84F88 DRE (17-21 units)</p> <p><b>Volume Solids:</b> 34.0 ± 1%</p> <p><b>Weight Solids:</b> 43.0 ± 2%</p> <p><b>Viscosity:</b> 17-22 seconds #2 Zahn Cup          14-18 seconds #4 Ford</p> <p><b>Recommended film thickness:</b>          As a Sealer: As a Topcoat:(per coat)          Wet: 2.0-3.0 mils Wet: 2.5-4.0 mils          Dry: 0.6-0.9 mils Dry: 0.8-1.2 mils</p> <p><b>Maximum Dry Film:</b> 4 mils</p> <p><b>Spreading Rate</b> (no application loss)          440-701 sq ft/gal @ 0.8 - 1.2 mils DFT</p> <p><b>Drying</b> (77°F, 50% RH):          To Touch: 10-15 minutes          To Handle: 15-30 minutes          To Sand or Recoat: 30-60 minutes          To Pack or Stack: 24 hours          Force Dry: 5-20 min. at 110-160°F</p> <p><b>NOTE:</b> Coating must be applied and dried at a temperature of 70°F or higher to insure acceptable coating properties. See Product Limitations.</p> <p><b>Flash Point:</b> 50°F Pensky-Martens Closed Cup</p> <p><b>Pot Life:</b> 24 hours @ 77°F after catalyzation</p> <p><b>Package Life:</b> 1 year, unopened</p> <p><b>Mixing Ratio, Sealer:</b>          1 part Conversion Varnish          3% Catalyst V66V21          15% Butyl Acetate R6K18</p> <p><b>Mixing Ratio, Topcoat:</b>          1 part Conversion Varnish          3% Catalyst V66V21          5% Butyl Acetate R6K18</p> <p>Reduce with Butyl Acetate, R6K18 or MAK, R6K30 to maintain HAPS compliance. Toluene, Xylene or High Flash Naphtha 100 may also be used, but are not HAPS compliant.</p> <p><b>Pot Life:</b> 24 hours  <b>Package Life:</b> 1 year, unopened</p> <p><b>Air Quality Data:</b>          Non-Photochemically reactive          Volatile Organic Compounds (VOC) as packaged, maximum &lt;4.6 lb/gal, 550 g/L          Hazardous Air Pollutants (HAPS) As catalyzed and reduced with Butyl Acetate R6K18, less than 0.8 lb. per pound of solids</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.          Moisture content of wood should be 6 to 8%.</p> <p><b>Finishing System:</b></p> <ol style="list-style-type: none"> <li>1. Sealer—catalyze and reduce Varnish as a sealer. Spray a full wet coat. Air dry 30 minutes or force dry 5-20 minutes at 110°-160°F.              Note: Sher-Wood® Vinyl Sealers T67F3, T67F5, T67F6 and T67F7 may also be used as a sealer under Compliant Water White Conversion Varnish. <b>These sealers must be catalyzed.</b> Consult the corresponding data page for details.</li> <li>2. Sand with 220-280 grit paper, remove sanding dust.</li> <li>3. Topcoat—Catalyze Sher-Wood® Compliant Water White Conversion Varnish as a topcoat. For more depth apply a second coat.</li> <li>4. Allow overnight dry before packing or stacking. Force drying may be used.</li> <li>5. Maximum dry film thickness of the system must not exceed 4 mils because heavier films may cause cracking.</li> </ol> <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>An Environmental Data Sheet Is available from your local Sherwin-Williams facility.</p>

## APPLICATION

### Typical Setups

#### Conventional Spray:

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

#### Airless Spray:

Pressure ..... 1200-1800 psi  
Tip ..... .011-.013"

#### Air Assisted Airless:

Fluid Pressure ..... 800-900 psi  
Tip ..... .011-.013

#### Electrostatic Spray:

Substrate must be conductive

#### HVLP:

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

**Note:** Butyl Acetate R6K18 can be used as a reducer. MAK R6K30 and EEP R6K35 can be used to retard the coating system and maintain low HAPS. Acetone R6K9 can be used as a HAPS and VOC exempt solvent.

#### Cleanup:

Clean tools/equipment immediately after use Butyl Acetate, or HAPS free Lacquer Thinner R7K305.

Follow manufacturer's safety recommendations when using any solvent.

#### Performance Tests:

Cold Check Resistance ..... 20 cycles  
Print Resistance ..... No print  
SHER-WOOD Compliant Water White Conversion Varnish systems tested 18 hours at 2 psi at 77°F (25°C) in direct contact with 8 ounce Duck Cloth.

#### Household Chemicals Test

Panels prepared as for Print Resistance Test. After films were aged 30 days at 77°F (25°C), five drops of each item were placed under a watch glass for one hour. Then the 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. There is no visual effect on the following tests:

- |                                                     |                            |
|-----------------------------------------------------|----------------------------|
| • Household Ammonia                                 | • Vinegar                  |
| • Lemon Juice                                       | • Lipstick                 |
| • 50% Ethyl Alcohol                                 | • Red Ink                  |
| • Mercurochrome 2%                                  | • Mustard                  |
| • Washable Blue Ink                                 | • Turpentine               |
| • Oil Base Paint                                    | • Mayonnaise               |
| • Latex Emulsion Paint                              | • Sour Milk                |
| • VM&P Naphtha                                      | • Margarine                |
| • Orange Crayon                                     | • Butter                   |
| • Carbon Tetrachloride                              | • Water                    |
| • 10% Sodium Carbonate Solution                     |                            |
| • Grease (cooking fat, 25°C or 77°F)                |                            |
| • Detergent and Water Resistance (edge soak): ..... | Passed KCMA test procedure |

## SPECIFICATIONS

#### Product Limitations:

- SHER-WOOD Water White Conversion Varnish must be catalyzed 3% with SHER-WOOD KEMVAR Catalyst V66V21. Do not over catalyze. Do not use any other catalyst.
- Do not use over conventional nitrocellulose lacquer sealers. Seal with Sher-Wood® Vinyl Sealers T67F3, T67F5, T67F6 or T67F7 catalyzed, or conversion varnish.
- 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.
- Maximum film thickness must not exceed 4 mils dry film because heavier films may cause cracking.
- For interior use only.
- Customers are urged to pretest the system under shop conditions.
- For laboratory furniture and the best chemical resistance properties, Super KEMVAR "M" should be used.
- While catalyzed varnish remains a low viscosity liquid beyond 24 hours, it should not be used after 24 hours because a chemical reaction is taking place. The resultant film may have inferior cure and crosslinking and a tendency for long-term cold checking.
- To extend the use life at the end of the day, add 300-400% of uncatalyzed material. Add catalyst based on the uncatalyzed portion when ready to use the next day. Refrigeration also extends the working pot life.
- Do not use in recirculating systems such as flocoaters or curtain coaters. Recirculating paint lines are okay.
- **Temperature must be above 70°F during application and cure to insure acceptable coating properties.** Coatings cured at lower temperatures are prone to cracking, checking and brittleness.
- Do not pack or stack finished parts with less than the cure listed below:

Board Surface Temp.	Time
180°F	0.5 minutes
or 150°F	5 minutes
or 140°F	30 minutes
or 130°F	1 hour
or 100°F	8 hours
or 70°F+	24 hours

This is the time required for minimum cure.

- Natural finished wood will change color on aging and exposure to light. This is a natural phenomenon. Clear finishes will not prevent the wood from changing color.

## 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.