



Chemical Coatings

CC-F17A

SHER-WOOD® KEMVAR® Conversion Varnish

Gloss V84V60
 Medium Rubbed Effect V84F62
 Catalyst V66V21

Bright Rubbed Effect V84F61
 Dull Rubbed Effect V84F63

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p>SHER-WOOD® KemVar® Conversion Varnish is a high solids catalyzed wood finishing system offering a superior quality for furniture, cabinets and interior wood product.</p>	<p>Gloss (measured on black glass): V84V60 Full V84F61 BRE 55-60 units V84F62 MRE 34-38 units V84F63 DRE 17-21 units</p> <p>Volume Solids: 39 ± 1%</p> <p>Viscosity: 30-42 seconds #2 Zahn Cup 28-35 seconds #4 Ford Cup</p> <p>Recommended film thickness: As a topcoat: As a sealer (reduced): Mils Wet 3.0-4.0 Mils Wet 3.0-4.0 Mils Dry 1.0-1.3 Mils Dry 0.75-1.0</p> <p>Spreading Rate (no application loss) 469-642 sq ft/gal @ 1.0 - 1.3 mils DFT</p> <p>Drying (77°F, 50% RH): To Touch: 10-15 minutes To Handle: 15-30 minutes To Sand: 30-60 minutes To Recoat: 30-60 minutes Force Dry: 5-20 min. at 110-160°F</p> <p>Must be applied and dried at a temperature of 70°F or higher to ensure acceptable coating properties. See Product Limitations.</p> <p>Flash Point: 50-51°F Pensky-Martens Closed Cup</p> <p>Mixing Ratio: 1 gallon KemVar Varnish 3.8 fl. oz. (3%) V66V21 Catalyst</p> <p>Reduce up to 50% with Butyl Acetate R6K18 or MAK R6K30 to maintain HAPS compliance. Toluene, Xylene or Hi Flash Naphtha 100 may also be used, but are not HAPS compliant. The slower evaporating solvent is necessary for best flow and leveling on open grain woods such as oak and mahogany.</p> <p>Pot Life: 24 hours Package Life: 1 year, unopened</p> <p>Air Quality Data: Photochemically reactive Volatile Organic Compounds (VOC) as packaged, maximum 4.17 lb/gal, 501 g/L 1.07 lbs VOC/lb solids catalyzed 3% V66V21 and reduced 50% with Butyl Acetate 5.20 lb/gal, 624 g/L Hazardous Air Pollutants (HAPS) as packaged, less than 0.8 lbs per pound of solids</p>	<p>Wood (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>Testing: Due to the wide variety of substrates, surface preparation methods, and application methods and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.</p> <p>Wood Finishing System:</p> <ol style="list-style-type: none"> 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 or T67F7 may also be used as a sealer under KemVar Conversion Varnish. The sealers must be catalyzed. Consult the corresponding data pages for details. 2. Sand with 220 grit paper and remove all sanding dust. 3. Topcoat—catalyze and reduce Varnish as a topcoat. For more depth, apply a second topcoat. Allow to air dry overnight before packing or stacking. Force drying may be used. 4. Maximum dry film thickness of the system must not exceed 4.0 mils.
<p>Advantages:</p> <ul style="list-style-type: none"> • Meets the Federal HAPS rule for wood finishes as packaged* • High Build - 39% volume solids • Fast Drying • Meets the test requirements of the Kitchen Cabinet Manufacturer's Association (KCMA) • Self sealing - use the same product (reduced) as a sealer • Will not blush like lacquer products • Process efficient - many three coat applications can be done in two coats because of its high solids and high build • Versatile - may be applied by conventional, airless, or electrostatic spray • Good "hang" on vertical surfaces when reduced as recommended • Excellent toughness and mar resistance • Excellent moisture resistance • Excellent resistance to household chemicals • Excellent cold check resistance • Compatible with most production line stain systems • Conventional touch up procedures • Ideal for kitchen cabinets, vanities, chairs, office furniture, household furniture and a wide range of interior wood products • VOC compliant as packaged** • Free of lead hazards as packaged in compliance with Consumer Product Safety Commission's (CPSC) 16 CFR Chapter II: Subchapter B, part 1303. 	<p>An Environmental Data Sheet is available from your local Sherwin-Williams facility.</p>	
<p>*National Standards for Hazardous Air Pollutants (HAPS) Emissions for Wood Furniture Manufacturing Operations CFR40, Part 63, Subpart JJ</p> <p>**VOC compliance limits vary from state to state; please consult local Air Quality rules and regulations.</p>		

APPLICATION

Conventional Spray:

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

Airless Spray:

Pressure 1200-1800 psi
Tip011 - .015"

Cleanup:

Clean tools/equipment immediately after use with Butyl Acetate, R6K18, or MAK R6K30. Xylene or Toluene may also be used, but are not HAPS compliant. Follow manufacturer's safety recommendations when using any solvent.

SPECIFICATIONS

Performance Tests:

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

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.

No visual effect from the following items:

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	no visual effect
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
Carbon Tetrachloride	no visual effect
Mayonnaise	no visual effect
10% Sodium Carbonate Solution	no visual effect
Sour Milk	no visual effect
Margarine	no visual effect
Butter	no visual effect
Water	no visual effect
Grease (Cooking fat @ 77°F)	no visual effect

SPECIFICATIONS

Product Limitations:

- Sher-Wood KemVar Conversion Varnish must be catalyzed 3% with Sher-Wood KemVar Catalyst V66V21, then reduced.
- Apply directly to bare or stained wood for best adhesion and moisture resistance. Do not use conventional nitrocellulose lacquer sealers. Seal with reduced conversion varnish or with Sher-Wood Vinyl Sealer, T67F3, T67F5, T67F6, or T67F7 catalyzed.
- 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.
- Do not use in recirculating systems such as flocoaters or curtain-coaters. Recirculating paint lines are acceptable.
- 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 catalyzation because a chemical reaction is taking place. The resultant film may have inferior cure and cross-linking 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 only the uncatalyzed portion when ready to use the next day. Refrigeration also extends the working potlife.
- Temperature must be above 70°F during application and cure to ensure 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 dry time listed below:
Board Surface
Temperature Time
180°F ½ minute
150°F 5 minutes
140°F 30 minutes
130°F 1 hour
100°F 8 hours
70°F 24 hours
- 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.
- Not recommended over white stain or "pickled" finishes as Sher-Wood KemVar Conversion Varnish will yellow with time.
- To maintain HAPS compliance only reduce with HAPS compliant reducers.

CAUTIONS

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.

LABEL CAUTIONS

SEE CONTENTS STATEMENT ON LABEL.

Contents are FLAMMABLE. Vapors may cause flash fires. Keep away from heat, sparks, and open flame. During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

VAPOR HARMFUL. Avoid breathing vapor and spray mist. Use only with adequate ventilation. Before initial use, consult OSHA's Standard for Occupational Exposure to Formaldehyde (29 CFR 1910.1048). A properly fitted, full face respirator effective for particulates, organic solvents and formaldehyde or an air supplied respirator must be worn, unless air monitoring demonstrates vapor/mist concentrations are below permissible levels. Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.

FIRST AID: If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet. If on SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing. Launder before re-use. If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention. If SWALLOWED: Call Poison Control Center, hospital emergency room, or physician immediately.

SPILL AND WASTE: Remove all sources of ignition. Ventilate and remove with inert absorbent. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulation regarding pollution. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.

Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Contains Formaldehyde - a potential cancer hazard. This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. FOR INDUSTRIAL USE ONLY. SEE MATERIAL SAFETY DATA SHEET. 26984-112106.

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.