Industrial Wood Coatings

CC-F17A

SHER-WOOD® KEMVAR® Conversion Varnish

Gloss..... V84V60 Medium Rubbed Effect..... V84F62 Dull Rubbed Effect.....V84F63
Catalyst V66V21

DESCRIPTION

SHER-WOOD® KemVar® Conversion Varnish is a high solids catalyzed wood finishing system offering a superior quality for furniture, cabinets and interior wood product.

Advantages:

- Meets the Federal HAPS rule for wood finishes as packaged*
- High Build - 39% volume solids
- Meets the test requirements of the Kitchen Cabinet Manufacturer's Association (KCMA)
- Self-sealing - can use the same product (reduced) as a sealer
- 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
- Ideal for kitchen cabinets, vanities, chairs, office furniture, household furniture and a wide range of interior wood products
- Free of lead hazards as packaged in compliance with Consumer Product Safety Commission's (CPSC) 16 CFR Chapter II: Subchapter B, part 1303.

*National Standards for Hazardous Air Pollutants (HAPS) Emissions for Wood Furniture Manufacturing Operations CFR40, Part 63, Subpart JJ

CHARACTERISTICS

Gloss (measured on black glass):
V84V60 Gloss 85+
V84F62 MRE 34-38 units
V84F63 DRE 17-21 units
Volume Solids: 39 ± 1%
Viscosity:
30-42 seconds #2 Zahn Cup
28-35 seconds #4 Ford Cup
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
Spreading Rate (no application loss)
469-642 sq ft/gal @ 1.0 - 1.3 mils DFT
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
Must be applied and dried at a temperature of 70°F or higher to ensure acceptable coating properties. See Product Limitations.
Flash Point: 50-51°F PMCC
Mixing Ratio:
1 gallon KemVar Varnish
3.8 fl. oz. (3%) V66V21 Catalyst
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.
Pot Life: 24 hours
Package Life: 24 months, unopened
Air Quality Data (Theoretical):
- Photochemically reactive
- Volatile Organic Compounds (VOC) as packaged, maximum, less exempt solvents: 4.17 lb/gal, 501 g/L
- Catalyzed 3% V66V21and reduced 50% with Butyl Acetate: 5.20 lb/gal, 624 g/L
- Hazardous Air Pollutants (HAPS) as packaged: < 0.8 lbs per pound of solids

An Environmental Data Sheet is available from your local Sherwin-Williams facility or at www.paintdocs.com

SPECIFICATIONS

Surface preparation:
Wood - New Work (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%.
Previously finished wood (interior only)**:** Strip old finishes completely and remove all contaminants from the surface. Make sure surface is dry. Finish as new work.

Wood Finishing System:
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 Kem-Var Conversion Varnish. **These sealers must be catalyzed when used under Sher-Wood catalyzed topcoats. Consult the corresponding sealer 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.

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, compatibility and performance prior to full scale application.

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APPLICATION

Typical Setups

Conventional Spray:
Air Pressure..... 40-50 psi
Fluid Pressure ..... 6-8 psi

Airless Spray:
Pressure .....1200-1800 psi
Tip .....011 - .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

Product Limitations:
Sher-Wood KemVar Conversion Varnish must be catalyzed 3% with Sher-Wood KemVar Catalyst V66V21, then reduced

SPECIFICATIONS (cont)

Product Limitations: (cont).

- 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 flowcoaters 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 pot life.
- 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

FOR INDUSTRIAL SHOP APPLICATION ONLY

Thoroughly review product label and Safety Data Sheet (SDS) for safety information and cautions prior to using this product.

To obtain the most current version of the Environmental Data Sheet (EDS), Product Data Sheet (PDS), or Safety Data Sheet (SDS) please visit your local Sherwin-Williams facility or www.paintdocs.com.

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