



PRODUCT DATA SHEET

Gem Var[®] Clear Conversion Varnish

550-0010 Gloss (90°) 550-0012 Satin (35°)
 550-0011 Semi-Gloss (50°) 550-0007 Flat (12°)

DESCRIPTION	CHARACTERISTICS	SPECIFICATIONS
<p>The ULTIMATE in wood finishing technology in an easy to use system. Gem Var Clear Conversion Varnish is a crystal clear, non-yellowing catalyzed varnish with a 21 day pot life after catalyzation! Truly "state of the art" technology offering the highest of quality in an easy to use package. Gem Var can be used self-sealing, or if a separate sealer is used, we recommend 210-0008 Gem Seal Conversion Sealer. Gem Var addresses environmental and safety concerns by its low HAPs and VOC formulations. This product meets all of the pertinent government regulations regarding emissions and exceeds the performance parameters outlined by KCMA and ASTM.</p> <p>Product Advantages:</p> <ul style="list-style-type: none"> ➤ HAPs Compliant ➤ AIM Compliant ➤ Low Free Formaldehyde ➤ 21 Day Pot Life ➤ Extremely Durable and Moisture Resistant ➤ Water Clear ➤ Resists Yellowing ➤ Silky Smooth Feel ➤ Self-Sealing ➤ No Critical Recoat Time ➤ Catalyst Supplied in Pre-Measured Containers ➤ AWI TR-4 When Applied Self-Sealing ➤ AWI TR-5 When Applied Over Gem Seal Conversion Sealer ➤ Exceeds KCMA and ASTM Performance Requirements, When Applied to Manufacturer's Specifications ➤ Passes 24 hours ASTM D870-92 Water Immersion 	<p>Viscosity: 19-24" #4 Ford</p> <p>Weight Solids: 33-35%</p> <p>Volume Solids: 26-27%</p> <p>Weight/Gallon: 7.79-7.92 lbs/gal.</p> <p>Film Hardness: HB +/-1 overnight</p> <p>Color: 1</p> <p>VOC (reg/coating): 5.13-5.19 lbs/gal or 615-622 g/l</p> <p>VOC (Actual/Material): 5.13-5.19 lbs/gal or 615-622 g/l</p> <p>HAPs: .6413-.7043 lbs haps/lbs solids</p> <p>Catalyst: Catalyze with 4 oz or 118 ml of C7302 per gallon</p> <p>Coverage: 416-431 sq ft per gallon at one mil dry film thickness</p> <p>Dry Time: 10 Minutes</p> <p>Pot Life: 21 days @ 77° F</p> <p>Shelf Life: 12 months if uncatalyzed, unopened and stored in a cool dry area. Always rotate stock.</p> <p><i>Note: These numbers represent actual control values on a smooth, sanded substrate. Spray techniques, texture, and sealing as well as film thickness may give different results on actual work, but they may be used for comparison. To the best of our knowledge, the above technical data is true and accurate at the date of issuance but is subject to change without prior notice.</i></p>	<p>Surface Preparation: New wood: Remove any dirt, grease, glue or other contaminants and sand wood as required. Moisture content of wood should be 7-9%. Old wood: Strip old finishes completely and remove all contaminants from the surface. Make sure the surface is dry, sand as required. Finish as new work.</p> <p>Material Preparation: Catalyze Gem Var Conversion Varnish with pre-packaged catalyst kit in a stainless steel or plastic lined container. Mix or agitate thoroughly and allow a 20 minute induction period prior to application. Reduction may be required for certain types of application. SOL-9011 HAPs Free Thinner should be used for reduction. If a slower dry time is desired, use only SOL-9012 Haps Free Retarder. Tint using 844 colorants, at levels not to exceed 4%, by volume.</p> <p>Application: Gem Var Clear Conversion Varnish is designed for spray application. Temperature will affect viscosity. All products are designed to achieve the highest possible solids content at a viscosity low enough to allow proper spray atomization without the addition of costly chemical solvents. It is recommended that this product be applied 3-4 wet mils per coat with a maximum of three coats for the total coating system. It may be applied as a self-sealing system or a high quality conversion sealer, such as 210-0008, may be used as the first coat. Maximum dry film thickness should not exceed four mils.</p> <p>Clean Up: Use #500 Gem Coat Lacquer Thinner or SOL-9011 HAPs Free Thinner to clean all equipment. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.</p>

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CAUTION: DANGER! FLAMMABLE! VAPORS MAY CAUSE FLASH FIRE. VAPOR HARMFUL. HARMFUL OR FATAL IF SWALLOWED. INJURIOUS TO EYES. KEEP OUT OF THE REACH OF CHILDREN! BEFORE using this product it is essential that the "Material Safety Data Sheet" describing the product as well as the "Product Label" be reviewed. If your company does not have such information or has any questions, contact the manufacturer.

Date: Aug. 2010

Product Performance:

The **KCMA (Kitchen Cabinet Manufacturers Association)** test was conducted with the test panel in a vertical position. Each test panel was prepared as specified in the application instructions above. 3cc's of each chemical were placed on the coated surface and allowed to remain there for a period of 24 hours, with the exception of mustard, which was removed from the panel after one hour.

The **ASTM (American Society for Testing Materials)** test was conducted with the test panel in a horizontal position. Each test panel was coated as specified in the application instructions above. 3cc's of each chemical were placed on the coated surface and contained there by the use of a watch glass for a period of sixteen hours unless otherwise indicated.

The **AWI (Architectural Woodwork Institute) Chemical Resistance Test** is conducted by containing the test panel in a horizontal position while applying 1 milliliter of various chemicals to the surface of the coating. Each chemical is maintained at its respective location on the panel by the use of a watch glass. All chemicals are allowed to remain in contact with the coating surface for a period of 16 hours unless otherwise indicated.

Each chemical is then evaluated for its impact upon the coated surface, which includes such parameters as loss of gloss, discoloration, blistering, and delamination. The chemicals used and their respective effects upon the coating are as follows:

	KCMA Test		ASTM Test		AWI Test	
	Initial Results	Final Results	Initial Results	Final Results	Initial Results	Final Results
Catsup	No damage	No damage	No damage	No damage	N/A	N/A
Vinegar	No damage	No damage	No damage	No damage	N/A	N/A
Alcohol	No damage	No damage	No damage	No damage	N/A	N/A
Olive Oil	No damage	No damage	No damage	No damage		
2% Ammonia	No damage	No damage	No damage	No damage	N/A	N/A
Lemon Juice	No damage	No damage	No damage	No damage		
Coffee	No damage	No damage	No damage	No damage		
Mustard	No damage	No damage	No effect @ 1 hr	No damage		
Water	No damage	No damage	No damage	No damage	N/A	N/A
Motor Oil	N/A	N/A	No damage	No damage	N/A	N/A
Lighter Fluid	N/A	N/A	No damage	No damage	N/A	N/A
1% Palmolive Solution	N/A	N/A	No damage	No damage		
1% Tide Solution	N/A	N/A	No damage	No damage	N/A	N/A
4% Sodium Hydroxide	N/A	N/A	N/A	N/A		
10% Sodium Hydroxide	N/A	N/A	N/A	N/A		
28% Ammonia	N/A	N/A	N/A	N/A		
10% Sodium Phosphate	N/A	N/A	N/A	N/A		
95% Ethyl Alcohol	N/A	N/A	N/A	N/A		
Tomato Juice	N/A	N/A	N/A	N/A		
50% Sulfuric Acid	N/A	N/A	N/A	N/A		
Nail Polish Remover	N/A	N/A	N/A	N/A		
Glacial Acetic Acid	N/A	N/A	N/A	N/A		

KCMA 9.2 Hot and Cold Check Resistance Test:

All panels passed 21 cold check cycles (cycling from 120 °F. to -5°F. and 70% Relative Humidity to zero Relative Humidity).

KCMA 10.0 Detergent Water Resistance Test:

Passes 24 hours