



### GEM CLEAR CONVERSION VARNISH

#### DESCRIPTION

Gem Clear Conversion Varnish is a high performance, water clear, non-yellowing catalyzed varnish, with a proven track record in industrial use for high quality cabinets, furniture, and fixtures. This varnish can be applied over stained or natural wood as a self sealing system, or over a high quality post-catalyzed sealer. Gem Clear addresses environmental and safety concerns by its low HAPs and low VOC formulation. This product meets all of the pertinent government regulations regarding emissions and exceeds the performance parameters outlined by KCMA and ASTM. For wood substrates only. For interior use only.

PRODUCT NUMBERS / SHEENS		COATING PROPERTIES	PREPARATION INSTRUCTIONS
550-0013	Gloss(90°)	<b>Viscosity:</b> 13-16 #4 Ford <b>Weight Solids:</b> 41-42.7 % <b>Volume Solids:</b> 31.7-32.5% <b>Weight/Gallon:</b> 7.76-7.89 lbs./gal <b>Coverage:</b> 508-522 sq. ft. per gallon at one mil dry film thickness.  <b>VOC (reg./coating):</b> 4.51-4.57 lbs./gl. or 541-547 g/l <b>VOC (actual/material):</b> 4.51-4.56 lbs./gl. or 540-547 g/l <b>VOC Ratio:</b> 1.34-1.43 lbs. VOC/lbs. Solids <b>HAPS Ratio:</b> 0.18-0.19 lbs. HAPS/lbs. solids  <b>Dry Times:</b> <b>Air Dry:</b> at 78°F, relative humidity 50% To touch: 10-15 minutes To Handle: 15-30 minutes To sand/recoat: 45-60 minutes <b>Force Dry:</b> Flash: 8-10 minutes Bake: 15 min @ 110° F Cool down: 15 minutes Stack immediately after cool down Relative humidity will affect the speed of drying. Ideal conditions are 75°F or warmer at 50% humidity or less. Dry time will be faster at higher temperatures and lower humidity and equally slower at colder temperatures and higher humidity.  <b>Dry Film Thickness:</b> Maximum DFT for a complete system must not exceed 5 dry mils.  <b>Pot Life:</b> 48 hours @ 77° F in a sealed container.  <b>Shelf Life Un-Catalyzed:</b> 18 months @77° F if unopened and stored in a cool dry area. <b>Storage:</b> Keep away from heat or sparks	<b>Catalyzation:</b> Use pre-packaged catalyst kit: This is equal to 4.4 oz. of C7302 per gallon (3.4% by volume). Allow ten minutes for induction.  <b>NOTE: DO NOT add more than the recommended amount of catalyst! This will <i>not</i> make the product cure faster or harder and may cause cracking, haziness, gloss issues, and will affect the integrity of the final product.</b>  <b>Reduction: Important:</b> Always catalyze <i>BEFORE</i> reducing!  <b>Thinning:</b> This product is supplied ready to spray (after catalyzation).If needed due to conditions in your facility use SOL-9011 HAPs Free Thinner or SOL-9059 HAPs Free Reducer at levels not to exceed 10% by volume* . Max VOC after thinning as recommended is less than 725 grams per liter.  <b>Retarder:</b> If a slower dry time is desired, use SOL-9012 Haps Free Retarder at levels not to exceed 4% by volume*  *Thinning this material may result in increasing the VOC levels of this product. Refer to your local regulations before thinning.  <b>Approved Companion Products</b> <b>210-0008</b> <b>250-0009</b> <b>150-0013</b> <b>150-0014</b>
550-0014	Semi-Gloss(60°)		
550-0015	Satin(30°)		
550-0087	Dull (20°)		
550-0029	Flat(10°)		
PRODUCT ADVANTAGES			
<ul style="list-style-type: none"> <li>➤ HAPs &amp; AIM Compliant</li> <li>➤ Ultra Low Formaldehyde</li> <li>➤ Outstanding Chemical Resistance</li> <li>➤ Excellent Mar Resistance</li> <li>➤ Resists Yellowing</li> <li>➤ Water Clear</li> <li>➤ Self-Sealing</li> <li>➤ High Build With Fewer Coats</li> <li>➤ Catalyst Supplied in Pre-Measured Containers</li> <li>➤ Non Photo Chemically Reactive</li> </ul>			
<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 R</i></p>			

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## PRODUCT DATA SHEET GEM CLEAR SERIES CONTINUED



### Substrate preparation:

**New wood:** Remove any dirt, grease, glue or other contaminants. Moisture content of wood should be 7-9%. New wood: Sand to 150-180 grit. Proper sanding of wood is absolutely critical to achieve the best color development and adhesion of the coating to the substrate.

**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.



### Mixing Instructions:

Mix material thoroughly before and during use. Material may be mixed by hand or mechanical agitation at moderate speed. Catalyze Gem Clear Conversion Varnish with pre-packaged catalyst kit in a stainless steel or plastic lined container. Material should be agitated slowly while mixing in the catalyst. Rinse catalyst bottle with applicable solvent and add to product to ensure the material is properly catalyzed. Mix or agitate thoroughly for ten minutes before use.



**Application:** If staining, apply the approved Gemini stain of your choosing and let dry per the instructions on the PDS for that particular stain. Using conventional, HVLP, airless, or air assisted equipment, apply this product at 3-4 wet mils per coat. Let dry a minimum 45-60 minutes. Sand with 280-320 grit, no-fill sandpaper and remove sanding dust with clean compressed air, or tack rag. This product must be sanded in between coats to ensure proper adhesion.

Typically we recommend a coating system comprised of one coat of a Gemini companion conversion varnish sealer applied at 3-4 mils wet film build and 1-2 coats of topcoat applied at 3-4 mils wet film build. Please see Approved Companion Products section for approved sealers. This product may also be used as a self seal system. Used as a self seal system we recommend 2-3 coats applied at 3-4 wet mils per coat. Maximum film build for the entire system must not exceed 5 dry mils.



### Recommended Tip Sizes:

Conventional Air	1.4-1.8mm
HVLP	1.7-1.9mm
Airless	10-15 thousandths
Air Assisted Airless-	11-15 thousandths



### Precautions:

These products are intended for professional use only. Do not proceed if you are planning on mixing with other finishing systems or other manufacturer's products. Gemini will not be held liable for finish failures due to the improper use of our products or deviation from our finishing recommendations

### Equipment:

All equipment used with this product must have plastic, stainless steel, or Teflon fluid passages and wetted parts

### Containers:

We supply this material in a lined container. All containers used in conjunction with storage and/or application of this product must be stainless steel, plastic, or otherwise acid resistant.

### Clean Up:

Use SOL-9011 Non HAPs Thinner or SOL-9059 HAPs Free Reducer to clean up all equipment. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

**Care and cleaning of this finish:** Use a mild dishwashing liquid and a damp cloth to remove food, grease, and other residue. Wipe dry. Do not use cleaners that contain ammonia, bleach, or abrasives as this may damage the finish.