emtech™

Water Based Coatings for a Changing World™

EM2000WVX SERIES

WATERBORNE/ALKYD/INTERIOR/EXTERIOR/CLEAR VARNISH

Leed Credit ID: EQ4.1, EQ4.2, EQ4.5

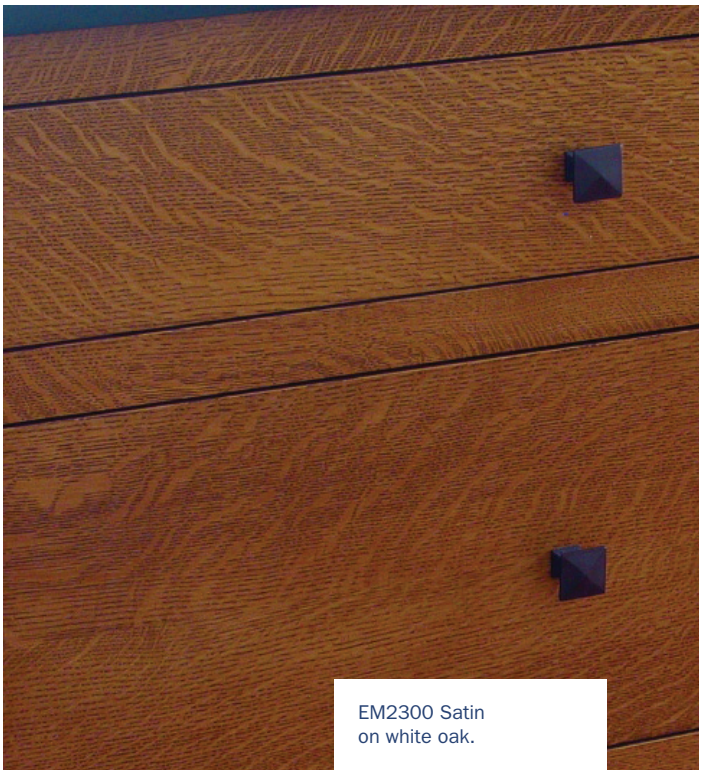
Haps Free/NMP Free/Ultra Low Voc

EM2000wvx Waterborne Alkyd Varnish represents the latest technology in water-based wood coatings for interior and exterior architectural and specialty wood finishing applications. EM2000wvx will create the warm glow of a traditional alkyd based varnish and will define the beauty of the substrate it is protecting, all with the speed and safety of ultra-low VOC water-based chemistries.

EM2000wvx Waterborne Alkyd Varnish is chemically similar to our venerable Oxford Series Hybrid Varnishes. However, continuing with our proprietary EMTECH™ process, the EM-2000wvx offers improved physical and application behaviors such as improved slip, water beading and dirt repellence. Also, the new EM2000wvx cures more rapidly, putting it into service faster than its predecessors. With these features, the new EM2000wvx continues to bring together the best features of oil-based varnishes and waterborne urethanes into one unique package.

EM2000wvx Waterborne Alkyd Varnish is well suited for use on high-end furniture and cabinet applications, as well as moisture/UV-exposed environments such as window and door trim packages. Specially formulated for industrial spray applications, EM2000wvx is also extremely brush friendly for projects that require brush application.

EM2000wvx Waterborne Alkyd Varnish can be fortified with our CL100 Cross-Linker to create a post-catalyzed type varnish. The addition of 2 to 5% by liquid volume of CL100 will improve the physical durability of EM2000 by tightening the molecular structure of the cured resin. CL100 improves the resistance of the cured film against high pH cleaners, alcohols and slow evaporating household chemicals. See the TDS for CL100 Cross-Linker for more information.



EM2300 Satin on white oak.

Photo Courtesy of Steven Prescott

Chemical Resistance Standards

Chemical Resistance:
KCMA Spot Test on Sealed Maple Veneer with 4-2mil coats of EM2000 Gloss.
4-Hour Dwell Time/4-Hour Recovery Time

Compound	Results
Glass Cleaner	No Effect
409™	No Effect
Warm Water (100°F)	No Effect
Black Coffee	No Stain/No Effect
Lacquer Thinner	Softening/Full Recovery
Denatured Alcohol	Softening/Minor Witness Line
Acetone	Softening/Full Recovery

Spray Gun Set Up Recommendations*

Compressed Air HVLP	1.3mm–1.5mm needle set and corresponding air cap
Air-Assisted Airless	.09–.11 tip set
Airless	Fine finish tip set

**Consult with spray gun manufacturer for specific air pressure settings.*

Part Number & Sheen Chart

Part Number	Sheen Description	Gloss Reading
EM2100	Gloss	85°
EM2200	Semi-Gloss	60°
EM2300	Satin	40°
EM2400	Flat	15°

Physical Specifications

Coating Density: 8.60 lbs./Gal.
Solids % by Weight: 34%nv (gloss format)
VOC Content Actual: 21 Grams/Liter
VOC Content Regulatory: 46 Grams/Liter
HAPS Content: 0.0
pH: 8.5 – 9.0
Viscosity: 35-40 Sec Zahns #2 Cup
Dry Time: 45-60 minutes at 3mils wet
Spread Rate: 400sq ft. per Gallon @ 3mils
Appearance: Light Straw/Light Amber
Flash Point: Above 200°F
Shelf-Life: 24+ Months

Features and Benefits

Classic Alkyd Varnish Look & Feel
Ultra Low VOC
HAPs Free
SCAQMD Regional Compliant
USEPA AIM National VOC Compliant
LEED Credit Compliant
100% Burn-In Technology
Multiple Substrate Adhesion Performance
Fast Dry/Recoat Time
Water Clean Up
Non-Hazardous/Non-Flammable

Directions for Use

All surfaces to be finished must be clean, dry and free of excess contamination. Proper surface preparation is the key to a successful finish.

1. Sand surface to be finished with quality, stearate-free sandpaper. The sandpaper grit schedule will vary between 220 to 400-grit depending on the surface condition and type of wood being finished.

   After the surface has been sanded and prepared, remove dust with a water-damped, lint-free cloth. DO NOT USE OIL/WAX TACK CLOTHES.

2. If the surface to be finished has a grain filler, glaze or solvent-based stain applied to it, ensure that these products are compatible with the EM2000wvx by preparing and a test panel before proceeding. If compatibility is in question, seal the opposing surface with dewaxed shellac before finishing with EM2000wvx.

3. Mix varnish gently before using. If using semi-gloss, satin or flat versions, ensure that all flatting agent is mixed back into solution.

4. Apply 2 coats EM2000wvx reduced upwards to 20% by liquid volume with basic tap water to act as a penetrating sealer coat. Allow each coat to air dry for a minimum of 1-2 hours, or when the sealer coat gently powders when sanded without clogging the sandpaper.

5. Apply topcoats of EM2000wvx as supplied, or thinned 5% by liquid volume with basic tap water. Allow each coat to air dry for a minimum of 1 hour before recoating. Sanding between each coat is not required unless defects are visible or the last coat has dried for more then 24 hours. Lightly sand with 400 or 600-grit stearate free sandpaper to remove imperfections. Allow the finish to dry and cure in a warm, dry area. Final chemical cure takes place after 150 hours at 70F.

Clean Up

All Target Coatings water-based finishes clean up with soap and water. Rinse brushes, spray equipment and other application tools with warm, soapy water, then follow up with a plain, clean water rinse. Do not use alcohol or oil-based solvents to thin or clean up this material.

Emergency First-Aid Procedures

Ingestion:
Administer large volumes of water.
DO NOT INDUCE VOMITING.
SEEK IMMEDIATE MEDICAL ATTENTION.

Inhalation:
Remove exposed person(s) to well ventilated area.
Treat symptomatically.

Eyes:
Flush with fresh water.
Seek medical attention.

Skin:
Flush with fresh water.
Seek medical attention if irritation persists.

Use only in well ventilated areas. Avoid inhaling spray mist. Wear a NIOSH/MSHA approved respirator during spray applications.

EM2200 Semi-Gloss over custom WR4000 Stain on reclaimed timber.

Photo courtesy of Target Coatings.