



emtech™

Water Based Coatings for a Changing World™

EM7000 SERIES

HIGH-BUILD/NON-YELLOWING WATER BASED ACRYLIC LACQUER

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

EM7000 High Build Lacquer: Our Non-Yellowing Lacquer Alternative

EMTECH™ EM7000 High-Build Water Based Acrylic Lacquer (HBLv3.0) is a ultra clear, non yellowing water-based acrylic lacquer that utilizes advanced polymer resins and HAPS-Free solvent technologies to provide a unique, self-leveling wood finish designed for commercial and industrial applications. Formulated for use in furniture, cabinet, interior architectural and custom woodworking applications, EM7000HBL provides a fast drying lacquer system with exceptional clarity, outstanding adhesion qualities with a fast film build performance in a Ultra-Low VOC (ULVOC), 100% water-based system. EMTECH™ EM7000HBL Lacquer features a unique adhesion characteristic that allows it to bond to a wide variety of properly prepared substrates such as synthetic wood panels, carbon fiber, PVC, ferrous and non-ferrous metals. This feature gives great latitude of use for the finishing professional when working with EM7000HBL Lacquer.



When used as a self-sealing system EM7000 offers fast drying and quick film building properties similar to CAB acrylic systems and CV-type varnishes. EM7000HBL generates excellent clarity and color definition when used with our EM1000 Universal Sanding Sealer or as a stand-alone production finish.

EM7000HBL non-yellowing properties generate excellent clarity and color definition when used as a protective top coat over painted finishes such as our EM6500 Custom Color Lacquers.

EM7000HBL High Build Lacquer can be fortified with our CL100 Cross-Linker to create a post-catalyzed type lacquer system. The addition of 5 to 10% by liquid volume of CL100 will improve the physical durability of EM7000 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.



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KCMA-Type Test Specification Results

Substrate and Preparation: Testing was performed on maple veneer plywood panels sealed with 3 coats of EM7100 Gloss Lacquer, spray-applied at 75°F / 35% RH, at a wet mil thickness of 3mil per coat. Panels were allowed to cure for 7 days before testing.

Chemical Resistance:

Horizontal Position, 24-Hour Exposure (uncovered)
Water washed and air-dried



| Compound | Results |
|----------------------------------|--|
| Distilled Water (Room Temp) | Pass—No Effect |
| RTU Glass Cleaner | Pass—No Effect |
| RTU All Purpose Cleaner (pH 9.5) | Pass—Slight Softening, Full Recovery |
| Hot Coffee | Pass—Slight Swelling, Full Recovery |
| Olive Oil | Pass—No Effect |
| Orange Juice | Pass—Slight Softening, Full Recovery |
| Denatured Alcohol | Pass—Moderate Softening, Full Recovery |
| Acetone | Pass—Moderate Softening, Full Recovery |
| Lacquer Thinner | Pass—Moderate Softening, Full Recovery |

Features and Benefits

| |
|--------------------------------------|
| HAP's FREE |
| USEPA AIM National VOC Compliant |
| OTC / MRPO Regional Compliant |
| SCAQMD Regional Compliant |
| LEED Credit Compliant |
| Multi-Substrate Adhesion Performance |
| 100% Burn-In Technology |
| Fast Dry-Time |
| Stronger than Nitrocellulose |
| Excellent Clarity |
| Water Clean Up |
| Non-Flammable |
| Non-Yellowing/Water White |

Physical Specifications

| |
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| Coating Density: 8.60 lbs./Gal. |
| Solids % by Weight: 30.0%nv (gloss format) |
| VOC Content Actual: 43 Grams/Liter |
| VOC Content Regulatory: 98 Grams/Liter |
| HAPS Content: 0.0 |
| pH: 8.5 – 9.0 |
| Viscosity: 35-40 Sec Zahns #2 Cup |
| Appearance: Off-white emulsion |
| Dry Time: 25- 35 minutes @ 3mils wet |
| Spread Rate: 400 sq ft. per Gallon @ 3mils wet |
| Flash Point: Above 200°F |
| Shelf-Life: 24+ Months |
| Freeze/Thaw Cycles: 1+ |

Print Resistance: 4psi Weight

| | |
|----------------|----------|
| 24hrs @ 70°F | No Print |
| 1 Hour @ 100°F | No Print |
| 1 Hour @ 140°F | No Print |

Part Number & Sheen Chart

| Part Number | Sheen Description | Gloss Reading |
|-------------|-------------------|---------------|
| EM7100 | Gloss | 85° |
| EM7200 | Semi-Gloss | 60° |
| EM7300 | Satin | 40° |
| EM7400 | Flat | 15° |



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 tip set |

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

Directions for Use

All surfaces to be finished must be clean and free of oil, dust and contamination that may cause fisheyes or poor adhesion. Clean surface with denatured alcohol or fresh water. Allow surface to thoroughly dry before proceeding. Fine sand surface to be finished with the appropriate grade sandpaper based on the type of final finish required.

If the surface to be finished has a grain-filling type glaze, sealer or paste; ensure that the systems are compatible with one another by preparing a test panel before proceeding. Certain solvent-based fillers and glazes may prevent proper adhesion of the topcoat if not thoroughly cured. Ensure that grain fillers have been sanded with a minimum of 400-grit sandpaper and all contamination is removed. Oil-Based glazes should be air-dried and tested to ensure proper early adhesion of the water-based topcoat.

Spray-apply each coat of EMTECH™ EM7000 High Build Water Based Acrylic Lacquer with HVLP, Conventional or Airless/Air-assist spray equipment. Consult with your spray gun manufacturer for proper gun set-ups based on coating viscosity and intended use.

Spray gun operators must wear a NIOSHA approved respirator during the spray application of this material. Consult the Material Safety data Sheet of this material for safety and health procedures.

Unfinished/New Wood:

1. After surfaces has been prepared remove all dust with a wax/oil-free tack cloth.
2. Mix EMTECH™ Lacquer well before using.
3. EMTECH™ Lacquer can be sprayed without reducing with water or Target SA5 Spray Retarder. However, additions of

SA5 Retarder may be required to slow-down the system if the lacquer is drying too quickly during high temperature applications.

4. Reduce EMTECH™ Lacquer upwards to 50% with water if lacquer is to be used as a pre-stain sealer or tie-coat between stain or dye coats to prevent color bleed.
5. Apply the required number of coats of EMTECH™ Lacquer to obtain the desired film-build and final look. A minimum of 2 coats applied at 2-4 mils per wet coat is required to obtain a thin film set. There is no limit to the total number of coats of EMTECH™ Lacquer that can be applied. Allow each coat to dry for a minimum of 30-45 minutes before recoating. Sanding between each coat is not necessary unless contamination has effected the film formation, or if the last coat has dried for more then 24 hours. Sand with 600-grit sandpaper to remove surface imperfections, runs, sags and contamination. Remove sanding dust as specified and apply final coat as required.



EM7000HBL on ribbon striped mahogany.

Photo courtesy of Target Coatings.



EMTECH™ EM7000 High Build Lacquer can be polished to a variety of sheen's with the use of modern polishing products designed for acrylic applications.

Dry Time

Allow each coat to thoroughly dry before applying additional coats of lacquer. For best results apply during low humidity conditions. If whitening or blushing occurs in the semi-cured coats, allow lacquer to return to a clear state before applying additional coats. Best temperatures are 60°-80°F. Complete chemical cure time is after 125 hours within these temperature ranges.

Clean-Up

All Target Coatings EMTECH™ Series finishes cleanup with fresh, warm water. Rinse spray gun fluid handing equipment thoroughly with water after each use. If finish dries to hard film soak gun parts in a reduced water-based paint stripping solution.

Emergency First-Aid Procedures

Ingestion:

Administer large amounts 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:

Wash exposed area with warm, soapy water.
Seek medical attention if irritation occurs.

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