emtech™

Water Based Coatings for a Changing World™

EM6000 SERIES

WATER-BASED PRODUCTION LACQUER

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

HAPS free/Ultra low VOC

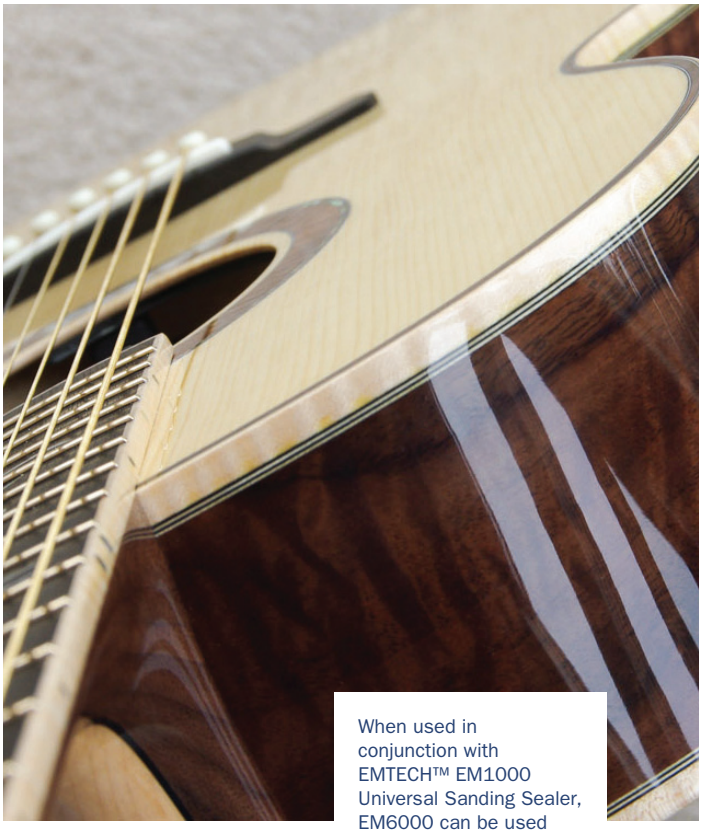
EMTECH™ EM6000 Production Lacquer (EPLv8.0) is an ultra clear, water based acrylic lacquer that utilizes advanced polymer resins and HAPS-Free solvent technologies to provide a unique, self-leveling wood finish designed for commercial and industrial applications. Formulated for use in furniture, cabinet, interior architectural and custom woodworking applications, EPL provides a fast drying lacquer system with exceptional clarity, outstanding adhesion qualities and a nitrocellulose-type appearance and performance in a Ultra-Low VOC (ULVOC), 100% water-based system.

Solvent Look and Feel

EMTECH™ EM6000 Production 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-fibre, PVC, ferrous and non-ferrous metals. This feature gives great latitude of use for the finishing professional when working with EM6000 Production Lacquer.

When used as a self-sealing system EM6000 Production Lacquer offers fast drying and sanding features identical to those of traditional nitro-cellulose lacquers and CAB acrylic systems. EPL generates excellent clarity and color definition when used with other sealers or as a stand-alone production finish. EPL is non-flammable, low in odor and cleans-up with water.

EM6000 Production Lacquer can be fortified with our CL100 Cross-Linker to create a post-catalyzed type lacquer. The addition of 2 to 5% by liquid volume of CL100 will improve the physical durability of EM6000 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.



When used in conjunction with EMTECH™ EM1000 Universal Sanding Sealer, EM6000 can be used to create a deep, clear, lustrous finish when polished to a high gloss or rubbed to a satin/matte effect.

Photo courtesy of Casper Guitar Company.

KCMA-Type Test Specification Results

Substrate and Preparation: Testing was performed on maple veneer plywood panels sealed with 3 coats of EM6100 Gloss Lacquer, spray-applied at 70°F / 35% RH, at a wet mil thickness of 3mil per coat. Panels were allowed to cure for 14 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
Coffee	Pass–Slight Stain and Softening
Olive Oil	Pass–No Effect
Orange Juice	Pass–Slight Softening, Full Recovery
Denatured Alcohol	Pass–Film Softening, Full Recovery
Acetone	Pass/Fail–Moderate Film Degradation
Lacquer Thinner	Fail–Complete Film Degradation

Sheen & Part Number Chart

Part Number	Sheen Description	Gloss Reading
EM6100	Gloss	85°
EM6200	Semi-Gloss	60°
EM6300	Satin	40°
EM6400	Flat	15°

Physical Specifications

Coating Density: 8.60 lbs./Gal.
Solids % by Weight: 24%nv (gloss format)
VOC Content Actual: 41 Grams/Liter
VOC Content Regulatory: 94 Grams/Liter
HAPS Content: 0.0
pH: 8.5 – 9.0
Viscosity: 30–35 Sec Zahns #2 Cup
Dry Time: 25-30 minutes @ 3mils
Appearance: Off-white emulsion
Flash Point: Above 200°F
Shelf-Life: 24+ Months

Features and Benefits

100% Burn-In Technology
Ultra Low VOC
Nitrocellulose-type film build
HAPs Free
SCAQMD Regional Compliant
USEPA AIM National VOC Compliant
LEED Compliant
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 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™ EM6000 Production 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.

Application on 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 of 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. Using EMTECH™ EM1000 Universal Sanding Sealer will also work as a pre-stain sealer or intermediate coat prior to using EM6000.
5. Apply the required number of coats of EMTECH™ Lacquer to obtain the desired film-build and final look. A minimum of 3 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 25-30 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 400-grit sandpaper to remove surface imperfections, runs, sags and contamination. Moving up to 600 or 800-grit sandpaper is recommended if a high-build finish is required. Remove sanding dust as specified and apply final coat as required.

EMTECH™ EM6000 Production Lacquer can be polished to a variety of sheen's with most automotive grade polishing products. Test polishing system of choice before committing to final polishing procedure.

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.*

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 120 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 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.