



emtech™

Water Based Coatings for a Changing World™

EM9300 SERIES
POLYCARBONATE EXTERIOR GRADE ARCHITECTURAL URETHANE

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



EM9300 Polycarbonate Urethane on exterior furniture application

Photo courtesy of Target Coatings.

EM9300 Polycarbonate Urethane: Exterior Durability with Fine Finish Results

Target Coatings EmTech EM9300 Waterborne Polycarbonate Urethane is a water-clear, non-yellowing polycarbonate urethane coating engineered to provide exceptional adhesion to wood, non-ferrous metal, fiberglass, stone, cement and carbon fiber substrates. Formulated as a final topcoat for high-end applications such as exterior structural architectural woodwork, beams and window/door packages and applications that require a hard yet flexible coating in high UV exposure environments. EM9300 offers excellent water resistance during vertical water exposures.

EM9300 Polycarbonate Urethane can be fortified with our CL100 Cross-Linker for use in interior applications only. We do not recommend the use of CL100 in EM9300 for long-term exterior exposure applications. Consult with Target Coatings technical support for more information regarding the use of CL100 in EM9300.



Surface Preparation:

Architectural wood surfaces should be sanded with a minimum of 80-grit, low stearate content aluminum oxide sandpaper to remove mill glaze and any excess material. The final sanding schedule should be reviewed based on the desired final finish. A maximum of 320-grit is suggested. Surface must be clean, dry and free of any contamination by moisture, grease, oil or dirt. Remove contamination with denatured alcohol and water mixed 50:50. If heavy grease or oil is evident use a biodegradable wood cleaner to remove the contamination, then follow up with water/alcohol wash down. Wood substrates should be kiln dried and not exceed 10% moisture content.



Application Methods:

Target Coatings EM9300 Waterborne Polycarbonate Urethane can be applied by brush, roller or spray method. Back brushing with a poly-bristle brush is recommended for applications onto substrates rougher than 180-grit sanding schedule to ensure even surface penetration and film formation. Product may also be applied with a lint free roller and then back brushed into the substrate. Spray methods include Conventional, HVLP, Air-Assisted Airless & Airless sprayers. Consult with your spray equipment manufacturer to determine the appropriate gun set and air pressures based on coating viscosity and intended use.

Physical Specifications

Coating Density: 8.60 lbs/Gal.
Solids % by Weight: 35% _{nv}
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 @ 3mils wet
Spread Rate: 400 sq ft. per Gallon @ 3mils wet
Appearance: Off-white emulsion
Flash Point: Above 200°F
Shelf-Life: 24+ Months

Features and Benefits

Exterior-grade clear coat/non-yellowing
Ultra Low VOC
HAPs Free
NMP/Hydrazine Free
California Prop. 65 Compliant
SCAQMD Regional Compliant
USEAP AIM National Compliant
LEED Compliant
Multiple Substrate Adhesion Performance
Water Clean up
Water Clean Up
Non-hazardous/Non-flammable

Part Number & Sheen Chart

Part Number	Sheen Description	Gloss Reading
EM93100	Gloss	85°
EM93200	Semi-Gloss	60°
EM93300	Satin	40°
EM93400	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.



Applications:

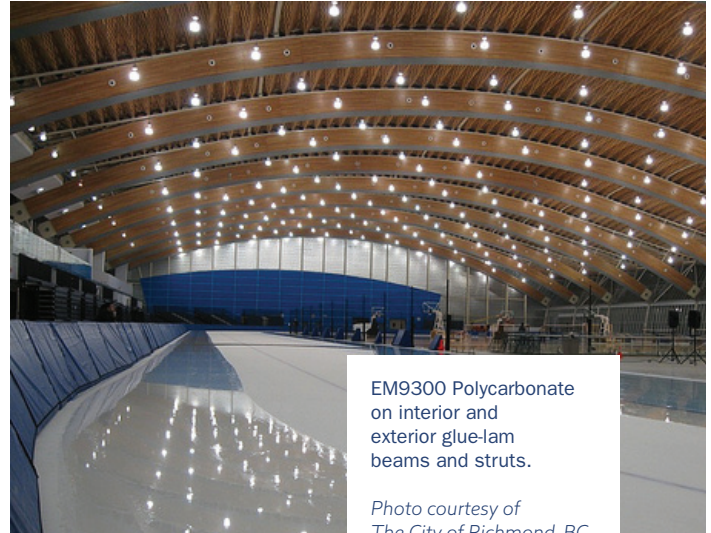
Applications will vary depending upon the specific functional requirements of this coating. A minimum of 4 coats of EM9300 Waterborne Polycarbonate Urethane should be applied to obtain a durable film formation. All coats should be applied at 3-4 mils wet per coat on a (rough) wood substrate sanded 80g. Each coat should be allowed to dry completely for 1 hour @ 20C before recoating. Application temperatures must be above 10C° and relative humidity below 80%. Do not apply coating to substrates where the moisture content is over 10%. Excess moisture may cause film clouding, adhesion problems and premature film failure. Do not apply coating to exposed areas when rain is forecast or imminent within 24 hours.

Tinting:

Target Coatings EM9300 Waterborne Polycarbonate Urethane can be tinted with water-soluble universal colorant such as Benjamin Moore Gennex®, Sansin Eco-Tone® and Accurate Dispersion GeoShades®. Do not exceed more than 5% by liquid volume tint load into the clear base.

Maintenance Procedure & Care:

The expected life cycle of Target Coatings EM9300 Waterborne Polycarbonate Urethane will vary based on UV, moisture and ambient pollution exposure. The key to long-term substrate protection is periodic inspection and maintenance of this coating. Inspect the film formation qualities of this coating as it ages. Dulling, oxidation and film thickness reduction of the cured finish is a sign that the coating is breaking down. A periodic cleaning and re-coating should occur when any of these physical signs begin to appear. Wash the effected surface with a biodegradable wood surface cleaner to remove all surface dirt and inspect for film adhesion integrity. If adhesion of the coating is acceptable, lightly abrade the surface to be recoated with a medium grade 3M Scotch-Brite® pad and rinse off residue with fresh water. Allow the surface to dry and apply 2-3 coats of Target Coatings EM9300 Waterborne Polycarbonate Urethane as specified above. If the existing film formation is deteriorated beyond surface recoat repair, power-wash the remaining film formation off of the substrate and prep the surface for complete refinishing.



Warning:

This coating is not intended for use as a waterproofing membrane or for long-term exposure to standing/pooling (horizontal) water.

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:

Flush with fresh 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.