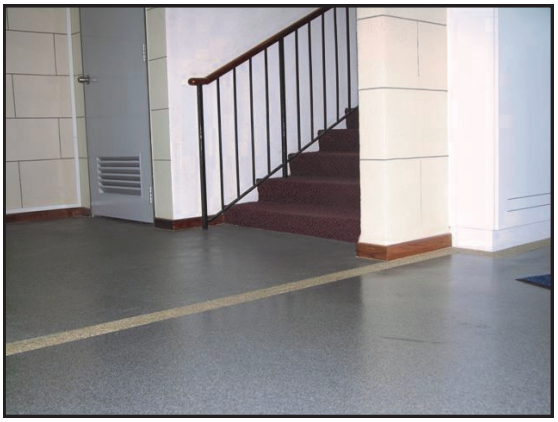
POLYARMOR® ESL Mortar 60-000

Epoxy Self Leveling Mortar Resin System

POLYARMOR® ESL MORTAR 60-000 is a 3 or 4-component, 100% solids, pigmented epoxy-slurry mortar system. **POLYARMOR® ESL MORTAR 60-000** resin is supplied with a chemical-resistant curing agent and is designed to be mixed with aggregate at a ratio of 13 pounds per gallon of mixed resin. This slurry can be hand trowel or slurry/cam rake applied.



APPLICATION CHARACTERISTICS

STORAGE: Materials should be stored in original un-opened containers indoors between 65°F (18°C) and 90°F (32°C) and at or below 50% RH.

SHELF LIFE: Un-opened containers 1 year from date of manufacture.

PACKAGING KITS/ PART NUMBERS:
Volume Mix Ratio: 4A: 1B: .125C: 65# SM-140

POLYARMOR® ESL MORTAR 60-000 Pigmented Epoxy Mortar 7.75 Cubic Foot
POLYARMOR® ESL MORTAR 60-000-A/5SF, POLYARMOR® ESL MORTAR 60-000GP-B/1, CP-U####/P, SM-140 (65 lb.)
POLYARMOR® ESL MORTAR 60-000 Pigmented Fast Set FS Epoxy Mortar 7.75 Cubic Foot
POLYARMOR® ESL MORTAR 60-000-A/5SF, POLYARMOR® ESL MORTAR 60-000FS-B/1, CP-U####/P, SM-140 (65 lb.)

OPTIONS:
Color Pack: Color packs designated as CP-U####/P can be used with POLYARMOR® ESL MORTAR 60-000. Many standard and custom colors are available; please refer to the price list for available colors. It is important to have a color consistent between the mortar and top coat coatings.
Traction: NS-36 glass beads or other suitable angular aggregate can incorporated with POLYARMOR® ESL MORTAR 60-000 top coats to impart improved traction in slip hazard areas.
LIMITATIONS:
Contamination and surface defects (fisheyes): If contaminates of oils, silicones, mold release agents and/or others are present, Top coats of POLYARMOR® ESL MORTAR 60-000 may fisheye or crawl away from the surface. Surface contaminates should be removes with a suitable detergent prior to application. Solvent cleaning of silicone contaminates may make the situation worse; please contact the lab for additional recommendations. POLYARMOR® ESL MORTAR 60-000 May amber over time from UV exposure. Top coat with an aliphatic urethane to improve UV.

APPLICATION

RECOMMENDED THICKNESS: POLYARMOR® ESL MORTAR 60-000 should be applied at a minimum 60 mils and a maximum of 90 mils.
MIXING: After mixing 4 gallons of epoxy resin POLYARMOR® ESL MORTAR 60-000-A with 1 gallon of POLYARMOR® ESL MORTAR 60-000GP-B and 1 pint of CP -U####/P for 3 minutes, add the entire mix into a running mortar mixer and add 65 pounds of SM-140 Aggregate. Mix until sand is completely wet (about 1 minute) Transfer to a deep plastic wheel barrow and apply to the floor. NOTE: MORTAR LEFT IN THE MIXER OR BARROW WILL HARDEN!
APPLY: POLYARMOR® ESL MORTAR 60-000 is installed at a rate of 210 square feet per 7.75 gallon (including sand) mix. Rake the wet mortar with a pin or cam rake set at 60 mils. Care should be taken not to position the rake handle above or below the applicators waist because the depth of application may vary.
CURING (DRYING): Allow the mortar to cure (dry) for a minimum 24 hours after application at 75°F (24°C) and 50% RH before finishing with the final desired top coats. Only open the floor to light traffic after sufficient cure, allow more time for low temperatures and higher humidity or for heavier traffic. Full coating properties may take up to 7 days to develop. MIX: Mix all components together for 3 minutes.
APPLY POLYARMOR® ESL MORTAR 60-000: at a rate of 60-90 mils to the floor surface using cam rake. Back roll the wet mortar with a looped roller or porcupine roller to remove entrained air and voids making the floor smooth and dense. Care should be taken not to over roll the mortar as blisters can develop.
CURING (DRYING): Allow the mortar to cure (dry) for a minimum 24 hours after application at 75°F (24°C) and 50% RH before sanding and/or finishing with the final desired top coats. Only open the floor to light traffic after sufficient cure, allow more time for low temperatures and higher humidity or for heavier traffic. Full coating properties may take up to 7 days to develop.

TECHNICAL SUPPORT

For application questions, please contact your VISURON TECHNOLOGIES, INC. salesman or technical service.

DISPOSAL

Dispose in accordance with federal, state, and local regulations.

USES

This system is designed for restoring old or damaged concrete by creating a dense protective resin layer. It also serves applications requiring increased abrasion resistance. Suited for industrial applications where epoxy slurry is specified to rebuild a damaged cap.

ADVANTAGES

- Applicator can select the proper curing color pack to match top coat colors
- No Odor
- Chemical resistance
- Excellent impact and abrasion resistance
- Seals concrete, protecting against dirt and spills
- Resists staining and major chemical spills of cleaning and industrial chemicals
- Complies with VOC regulations for Industrial Maintenance Coatings in the OTC and CA.

MATERIAL PROPERTIES*:

Properties	Test Method	Results
Flash Point	ASTM D3278	≥215 °F (102°C)
Volume Solids (mixed)	ASTM D2369	100 %
Mixed Viscosity (resin only)	ASTM D2196	400-700 cPs
Dry Time	ASTM D5895	Tack Free 4-6 hr Dry 6-10 hr Full Cure 7 days
VOC-Volatile Organic Compound	ASTM D3960	0 g/l clear
≤50 g/l with pigment pack		

CURED PROPERTIES*:

Properties	Test Method	Results
Abrasion Resistance Tabor CS-17, mg loss/1000 cycles/1000g mass	ASTM D4060	60 mg
Coefficient if Friction- COF James Test	ASTM D2047	0.55 0.65(w/NS-36)
Compressive Strength	ASTM C579A	11,000 psi
Adhesion to Concrete	ASTM D4541	350 psi concrete failure
Impact	ASTM D2794	12 in.lbs Direct & Reverse
Modulas of Elasticity	ASTM C580	$1.9x10^6$ psi
Application Thickness		60 mils minimum

*Properties and results are based on laboratory testing at 72°F (22°C) %50 RH, theoretical calculations and estimates. Typical properties, as stated, are to be considered as representative of current production and should not be treated as specifications.

VITECH™ VISURON TECHNOLOGIES, INC.

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Epoxy Self Leveling Mortar Resin System

RECOMMENDED APPLICATION

POLYARMOR® ESL MORTAR 60-000 should be applied at a minimum 60 mils and will cover 210 square feet per mix. **CURING AGENT USAGE: POLYARMOR® ESL MORTAR 60-000GP-B** is a General Purpose curing agent **POLYARMOR® ESL MORTAR 60-000FS-B** is a ***Fast Setting FS*** curing agent. Both may amber over time.

CHEMICAL RESISTANCE*:

POLYARMOR® ESL MORTAR 60-000/POLYARMOR® ESL MORTAR 60-000GP	1 Day	7 Days
ACIDS, INORGANIC		
10% Hydrochloric	E	E
30% Hydrochloric	F	P
10% Nitric	E	E
50% Phosphoric	G	F
37% Sulfuric	E	E
ACIDS, ORGANIC		
10% Acetic	G	F
10 % Citric	E	G
Oleic	E	E
ALKALIES		
10% Ammonium Hydroxide	E	E
50% Sodium Hydroxide	E	E
SOLVENTS		
Ethylene Glycol	G	G
Isopropanol	E	E
Methanol	P	P
d-Limonene	E	E
Jet Fuel	E	E
Gasoline	G	F
Mineral Spirits	E	E
Xylene	E	G
Methylene Chloride	P	P
MEK	P	P
PMA	G	G
MISCELLANEOUS		
20% Ammonium Nitrate	E	E
Brake Fluid	E	E
Bleach	E	E
Motor Oil	E	E
Skydrol®500B	E	E
Skydrol®LD4	E	E
20% Sodium Chloride	E	E
10% TSP	E	E

*Based on spot testing of the clear coating after 14 days of cure. Pigmented versions may see reduced chemical resistance and staining.

Legend: **E- Excellent (Not Effected) - Recommended**
G-Good (Limited Negative Effect) - Short Term Exposure
F-Fair (Moderate Negative Effect) - Not recommended
P-Poor (Unsatisfactory) - No Resistance to Exposure

INSPECTION AND APPLICATION:

Caution! Follow all precautions and instructions prior to installation.

CHECK THE SUBSTRATE CONCRETE: Substrate concrete must be free of curing membrane, silicate surface hardener, paint, or sealer and be structurally sound. If you suspect the concrete has been treated or sealed, prepare substrate for complete removal of treatment.

CHECK FOR MOISTURE: Concrete must be dry before applications of this floor coating. Test concrete for moisture vapor transmission (MVT) using calcium chloride testing ASTM F1869 or in-situ RH testing ASTM F2170. Do not exceed a maximum result of 3 pounds per 1000 sq. ft. over 24 hours or a value below 70% RH (internal concrete humidity).

EXCLUSION: Testing for MVT is critical, however it does not guarantee against future problems. If there is no vapor barrier or the vapor barrier is damaged, this to can contribute to floor failure. Contamination to concrete from oils, chemicals, excessive salts or Alkali Silica Reaction (ASR) may also contribute to floor failure.

CHECK THE TEMPERATURE AND HUMIDITY: During the application and cure of the coating, the substrate temperature, material temperature and room conditions should be maintained between 65°F (18°C) and 90°F (32°C). Relative Humidity (RH) should be limited to 30-80%. DO NOT apply coatings unless the floor temperature is more than five degree over the dew point.

APPLICATION EQUIPMENT:

Protective equipment and clothing as called for in the MSDS.
Power drill and mix blade.
Cam Rake set at 60 mils.
Hand Trowel.
Porcupine Roller to release air.
Surface sanders/grinders.
Vacuum equipment.

PREPARATION:

Surface dirt, grease, oil and contaminates must be removed by detergent scrubbing and rinsing with clean (clear) water.

Shot Blasting (bare concrete): Is a preferred method of surface preparation. Modify blaster to minimize too heavy of a surface profile and over-lap marks.

Diamond Grind (bare concrete): Results of grinding may vary depending on technique and the hardness of the concrete.

JOINTS: All non moving joints (control joints) can be filled with a semi-rigid joint compound such as POLYARMOR® SEALENT 25-000 or POLYARMOR® SEALENT 45-000. Construction joints may need to be re-built and re-cut and then filled with semi-rigid joint filler. Isolation or expansion joints must be filled with a flexible material designed for expansion and should not be coated over. All construction joints in the concrete must be honored in the epoxy mortar (IE: Re-cut and filled in the mortar).

RECOAT: POLYARMOR® ESL MORTAR 60-000 can be coated with other VISURON TECHNOLOGIES, INC. epoxy and urethanes. The prior cured coating surface must be sanded with 100 grit sand paper or sanding screen installed on a swing-type floor buffer. Sand to a uniform dulled surface. Remove all sanding debris with a vacuum and damp mop. Scrub with detergent and rinse with clean water. Surface must be dry before coating.

BARE CONCRETE APPLICATION: POLYARMOR® ESL MORTAR 60-000 MUST BE APPLIED OVER AN EPOXY PRIMER (OR SURFACE). Use either POLYARMOR® EPOXY 30-340 or POLYARMOR® EPOXY 10-000-A/POLYARMOR® EPOXY 10-000CR-B as the epoxy primer (See appropriate product data sheet for application instructions).

READ MATERIAL SAFETY DATA SHEET (MSDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

MAINTENANCE GUIDELINES:

Allow floor coating to cure at least one week before cleaning by mechanical means (IE: sweeper, scrubber, disc buffer).

CARE: Increased life of the floor will be seen with proper maintenance and will help maintain a fresh appearance of your new VISURON TECHNOLOGIES, INC. floor. Regularly sweep your new floor as ground in dirt and grit can quickly dull the finish thus decreasing the life of the coating. Spills should be removed quickly as certain chemicals may stain and can permanently damage the finish.

Only soft nylon brushes or white pads should be used on your new floor coating. Premature loss of gloss can be caused by hard abrasive bristle Polypropylene (Tynex®) bushes.

Use only neutral non butyl cleaning detergents on your floor coating. Test any new cleaning product on a non-conspicuous area prior to using to avoid damage to the floor.

CAUTION: Heavy objects dragged across the surface will scratch all floor coatings. Avoid gouging or scratching the surface.

Pointed items or heavy items dropped on the floor may cause chipping or concrete pop out damage. Plasticizer migration from rubber tires can permanently stain the floor coating. If a rubber tire is planned to set on the floor for a long period of time, place a piece of acrylic sheet between the tire and the floor to prevent tire staining. Rubber burns from quick stops and starts from lift trucks can heat the coating to its softening point causing permanent damage and marking.

REPAIR: Repair gouges, chip outs, and scratches as soon as possible to prevent moisture and chemical under cutting and permanent damage to the floor coating.

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