

MORTARTHANE™ HF

Trowel-Applied Cementitious Urethane



DESCRIPTION

Mortarthane™ HF is 100% solids, aromatic, cementitious urethane flooring system with enhanced technology that features a semi gloss finish mortar as opposed to older version “matte finish” mortars. It is designed to withstand aggressive chemical and thermal shock attack while providing abrasion resistance and the added benefit of easier surface cleanability due to less particle drag on surface when compared to matte finish (no gloss) systems that encounter particle “clinging” effects when cleaning. A chemical and abrasion resistant “cement-based”, aromatic urethane gloss topcoat (Mortarthane™ TC) is recommended for application and available to provide the specifier and owner a true monolithic gloss urethane cement flooring overlay.

PRODUCT ADVANTAGES

- Low odor
- Gloss exhibiting, enhances lighting
- Easier to clean and less contaminant “cling” due to gloss
- Co-efficient of thermal expansion similar to concrete
- Super adhesion
- Superior chemical resistance
- Easier maintenance and faster cleanability over earlier matte urethane cement finish systems
- Thermal shock resistant
- Tolerates dampness
- Self-priming in most installations
- Meets USDA, FDA, OSHA standards

USES

Mortarthane™ HF is designed to protect concrete from chemical attack, corrosion, impact and thermal shock. Repeated exposure to hot oil or steam does not cause pitting, cracking or crazing. Typical areas of application:

- Food processing areas
- Bakery proof, oven and baking rooms
- Chemical processing
- Cook / chill areas
- Bottling areas
- Sanitize / wash areas.
- Plant vehicle aisles

Typical Technical Data for Mortarthane™ HF		
Cure Time (@ 70°F)	Light traffic:	6-8 hours
	Light wheel traffic:	12-16 hours
	Full service:	3-5 days
Color	Red or grey	
Mix Ratio (by volume)	3 component kit	
Pot Life – 1 gallon @ 77°F	15 minutes	
Adhesion to Concrete	>400 psi, concrete fails before loss of bond	
Service Temperature	-100°F to 220°F (live steam)	
Toxicity	Sensitized individuals do not install or inhale vapor	
PHYSICAL PROPERTY	TEST METHOD	RESULT
Hardness (Shore D)	ASTM D-2240	85
Compressive Strength	ASTM C-579	8,500 psi
Tensile Strength	ASTM D-638	950 psi
Impact Resistance @ 125 mils	MIL D-3134	Pass
Flexural Strength	ASTM D-790	3,300 psi
Abrasion Resistance CS17 Wheel 1000 GM Load 1000 Cycles	ASTM D-4060	5 mg loss
Coefficient of Friction Standard Slip-Resistant	ASTM D-2047	0.9

Pot life is shorter at higher temperature. Do not use below 45°F or above 85°F

YIELD/COVERAGE

- 18 sq. ft. at ¼”

PACKAGING

- 5 gallon unit

GUIDE SPECIFICATIONS

This product is part of the Garon Products, Inc. family of resinous flooring systems. Please contact Garon for complete three part guide specifications.

SURFACE PREPARATION

All dirt, oil, dust, foreign contaminants, peeling coating and laitance must be removed from surface prior to coating to assure a trouble free bond. Previously coated floors exhibiting a strong bond to surface can be coated over by sanding down the existing coating.

Refer to Garon’s Master Surface Preparation & Moisture Guideline for complete details.

MIXING

Select a convenient mix area and protect the

surface from spillage by covering with a layer of cardboard and/or a sheet of plastic. Be generous with the amount of space you allocate for this function. The more comfortably your mixer works, the less likely you are to have a “mix error”. Make ready all necessary tools, mix and measure containers, etc. **Do Not Mix Until Ready for Immediate Use.**

Ensure all components are between 50-85°F. Any hardener crystallized (lighter color) by low temperature storage or transport must be decrystallized by heating to 110-120°F in a hotbox or water bath.

Mortarthane™ HF is supplied in pre-measured units consisting of one pail of resin, one jug of hardener and one bag of aggregate (powder). Double and triple mixes may be prepared. Pour resin into power mixer pail, scraping bottom and sides to assure all pigment is transferred. The resin and hardener should be added to a forced circulation pail mixer and pre-blended for

approximately 30 seconds. A Jiffler or Bird Cage mixer is **not recommended** for this product. Gradually add aggregate until homogenous mix is attained. (Approximately 1 minute). **Mixing all 3 components, part A resin, part B hardener and part C aggregate for more than 1 ½ minutes, especially in warm environments will cause product to prematurely harden in pail making rendering material.** Move the paddle back and forth scraping the bottom and sides of the pail while mixing. This is very important! **Thorough Blending Is Mandatory.** A properly mixed batch trowels easier and has a uniform surface appearance. Incomplete mixing will cause an inconsistent finish or possible blistering.

Have two mixing buckets that are rotated to assure minimum time between mixes. Clean mixing paddle and pail regularly to avoid mixing fresh material with older batches. This may result in irregular curing or blisters. Apply material immediately after mixing.

TROWEL APPLICATION

- A.** Planning. Proper planning is essential for satisfactory appearance of the finished floor. Joint lines will show in the finished floor. Lay out installation in sections to allow full width to be finished in 15 minutes or less to assure absence of placement lines.
- B.** Edge Details. Wherever a free edge will occur, including doorways, wall perimeter, expansion joints, columns and equipment pads, keyways must be cut in. At free edges, such as doorways, drains and transition to other floor systems, about a ½" wide by a ½" deep keyway is recommended. A ¼" by a ¼" is satisfactory for others.
- C.** Slope and Pitch. **Mortarthane™ HF** may be used on floors pitched up to a ½" per foot. At thicknesses greater than ½", Garon Grit™ 30™ or clean, dry 3/8" pea stone can be added to Mortarthane™ mortar mix to extend coverage rate.
- D.** Crack Repair and Patching. Small surface cracks in the concrete, such as shrinkage cracks, which are non-moving may be treated with Mortarthane™ SL. Wider cracks should be routed out to a depth and width twice the thickness of the
- Mortarthane™ HF** to form mortar that is applied by a steel trowel assuring compaction. Holes may be patched with Mortarthane™ Cove Mortar. Prime with Garon Prime™. Do not allow primer to puddle during repairs. Apply wet on wet and allow to cure 2-3 hours before proceeding with installation of the **Mortarthane™ HF** floor. **Allow primer to tack-up prior to placement of mortar.**
- E.** **PLACE ENTIRE BATCH OF MORTARTHANE™ HF ON THE FLOOR IMMEDIATELY AFTER MIXING AND BEGIN TROWELING IMMEDIATELY.** Spread at a desired thickness with a bucket screed, screed box or gage rake.
- F.** Finishing. Finish with a steel trowel. Apply sufficient pressure on the trowel to compact the **Mortarthane™ HF** as much as possible. If the mortar "pulls" creating a rough surface, the trowel has become sticky or it is positioned improperly. Do not use alcohol or solvent. The finished surface will follow the contour of the concrete substrate. Cracks and holes should be pre-filled with Mortarthane™ Cove Mortar before troweling overlayment. A bright light behind the applicator will readily reveal trowel marks. **DO NOT OVER TROWEL, as this results in variations in gloss and slip resistance AND MAY CAUSE BLISTERS IN CURED SURFACE.** LIGHTLY roll the surface with a clean 1/4" nap roller or adhesive roller to eliminate trowel marks and bring liquids to the surface. Replace sleeve periodically to reduce introduction or curing material to newly applied areas. **Failure to follow these instructions may also leave variations in surface color AND CAUSE BLISTERING IN CURED PRODUCT! APPLY MINIMAL PRESSURE TO THE ROLLER. HEAVEY PRESSURE WILL CAUSE TOO MUCH LIQUIDS TO RISE TO SURFACE AND BLISTERING OR DOMING MAY OCCUR.** Aluminum Oxide or sand may be broadcast into the wet resin for enhanced slip resistance. Rolling after broadcast will embed aggregate in resin reducing added slip resistance. Clean trowel with solvent but ensure the trowel is dry before using on the **Mortarthane™ HF**. Check for 1/4"

or 3/8" thickness frequently. Allow to fully cure. **NOTE:** Keep moisture from contacting **Mortarthane™ HF** during installation and curing. **Water may alter surface appearance OR CAUSE BLISTERING.** All plumbing leaks must be stopped or diverted prior to commencement of work.

TOPCOAT

It is recommended to topcoat the finished Mortarthane™ HF with Mortarthane™ TC (topcoat) to create a uniform final surface of Mortarthane™ HF system. See Mortarthane™ TC datasheet for mixing and application instructions.

IMPORTANT: Mix only what can be applied in 10 - 15 minutes. Never attempt to re-temper the mortar after it begins to set.

CURING

Allow a minimum of 6-8 hours cure before light foot traffic at 75oF. A minimum of 24 hours is required at 50°F. Additional time must be allowed for heavy loads.

MOISTURE CONCERNS

Moisture vapor transmission in the slab should be measured prior to application of polymeric systems to ensure a long lasting, durable installation. Please refer to the master "Moisture Assessment Guide" for more information.

LIMITATIONS

- This product is best suited for application in temperatures between 45°F and 85°F. Substrate must be clean, sound and dry.
- Color cannot be warranted as to uniformity of shade or conformity to samples.
- Exposure to ultraviolet light will change the color of **Mortarthane™ HF**. Sunlight and metal halide lighting will cause yellowing without affecting the performance.
- Certain chemicals and sugars will stain Mortarthane™ HF and Mortarthane™ TC (topcoat) Please consult Garon's Chemical resistant chart or call Garon at 800-631-5380 for assistance.
- The user is responsible for proper application.
- Do not re-seal moisture-contaminated hardener. This will result in carbon

- dioxide generation or possible violent rupture of containers.

STORAGE CONDITIONS

Mortarthane™ HF must be stored dry. Exposure of the aggregate to moisture for extended periods will cause lumps. Exposure of the hardener to water will lead to pressure build up from carbon dioxide generation. Do not reseal containers contaminated with moisture. Do not store near open flame or food. The shelf life is 6 months from ship date in the original unopened container.

CLEAN UP

Contain spills. Ventilate area. Use absorbent materials to collect. Dispose of according to local, state, federal regulations. Mixed components — uncured material can be removed with an approved xylene or keytone solvent. Cured material must be removed by mechanical means.

DISCLAIMER

The information and recommendations set forth in this document are based upon tests conducted by or on behalf of Garon Products, Inc. Such recommendations and information set forth herein are subject to change and pertain to the product(s) offered at the time of publication. Published technical data and instructions are subject to change without notice. Consult www.garonproducts.com or call 800-631-5380 to obtain the most recent Product Data, MSDS and Application instructions. This is not a controlled document.

COLOR

Applied samples, color charts, illustrations and reproductions in catalogs and other Garon publications are not guaranteed to match the color shades of materials ordered. Colors or clarity for clear may be affected by high humidity, low temperatures, or chemical exposure. Tire contact may cause discoloration. Slight lot-to-lot color variations may occur. Light or bright colors (white, safety yellow, etc.) may require

multiple coats or a suitable color coordinated primer to achieve a satisfactory hide. When ordering to match a previous color, inquire if the same lot number or quality control number is still available. Colors may vary from batch to batch, therefore, use only product from the same batch for an entire job.

FIRST AID

Skin contact- wash thoroughly with soap & water. If any product gets into the eye, rinse immediately and repeatedly with water for at least 15 minutes. For respiratory problems, remove person to fresh air. Wash clothing before re-use. Dust may cause skin or eye irritation. Wear gloves, eye and nuisance protection. **Consult MSDS** and call for medical care if necessary.

CAUTION

Follow the Hazardous Materials Identification System labeling guide for proper personal protective equipment to use when handling this product. Use only as directed.

CALL GARON FOR ISOCYANIDES SAFE HANDLING MANUAL AT 800-631-5380.

SLIP & FALL HAZARDS

Ensure cured coating surface remains dry in pedestrian, equipment and vehicular areas to avoid slips and falls of people, equipment and vehicles. Use caution when coating is wet or when oil, hydraulic fluids, grease or other chemicals, fluids or agents that may produce a slick surface are present. Increase slip resistance by broadcasting an appropriate size aggregate into the wet coating during application in all areas where enhanced coating traction may be necessary.

CLEANING

This product is considered to be a low maintenance flooring solution; however, certain textures and service environments require specific procedures. Please refer to the master “**Cleaning Guide**”.

Workers should wear protective clothing consisting of splash-proof goggles,

impermeable gloves and, where exposure limits are exceeded, organic vapor respirators. Adequate cross ventilation should be provided. **Any worker with prior sensitization should not be exposed to this product. Follow the Hazardous Materials Identification System labeling guide for proper personal protective equipment to use when handling this product. Use only as directed. FOR FURTHER INFORMATION CALL GARON AT 800-631-5380 FOR SAFE HANDLING PRACTICES OF ISOCYANIDES MANUAL.**

Keep container tightly closed. Not for internal consumption--consult MSDS for additional information. This product is for professional use only.

KEEP OUT OF REACH OF CHILDREN

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