MORTARTHANE™ SL

Self-Leveling Cementitious Urethane

DESCRIPTION

Mortarthane™ SL is 100% solids, aromatic, cementitious urethane flooring system with graded silica and fine fillers applied at 3/16" to 1/4" to produce a self-leveling semi-gloss finish of uniform color. **Mortarthane™ SL** has enhanced technology that features a semi-gloss finished self-leveling 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. This is due in part when **Mortarthane™ SL** is used in conjunction with Nutracid™. The system will have less particle drag on surface when compared to matte finish (no gloss) systems that encounter particle "clinging" effects when cleaning.

Typical Technical Data for Mortarthane™ SL	
Cure Time (@ 70°F)	Light traffic: 10 hours Light wheel traffic: 16 hours Full service: 3-5 days Heavy duty traffic: 48 hours
Initial Film Gel Time (joining up)	16 minutes
Color	Concrete grey, grey and red
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	75-80
Compressive Strength	ASTM C-579	9,000 psi
Tensile Strength	ASTM D-638	2175 psi
Impact Resistance @ 125 mils	MIL D-3134	Pass
Flexural Strength	ASTM D-790	5,076 psi
Abrasion Resistance CS17 Wheel 1000 GM Load 1000 Cycles	ASTM D-4060	24 mg loss
Coefficient of Friction Standard Slip-Resistant	ASTM D-2047	.71 – dry .63 - wet
VOC Content		0 g/l

USES

Mortarthane™ SL is designed to protect concrete, polymer reinforced screeds, or water resistant plywood from chemical attack, corrosion impact and thermal shock. Repeated exposure to hot oil or steam does not cause pitting, cracking or crazing.

- Chemical Processing
- Food Processing Areas
- Cook/Chill Areas
- Pharmaceutical
- Bakeries
- Cage Wash Areas
- Bottling Areas
- Sanitize/Wash Areas
- Plant Vehicle Aisles
- Mfg./Production Areas
- Warehouses
- Animal Care Areas

PRODUCT ADVANTAGES

- Low Odor
- Co-Efficient of Thermal Expansion
- Similar to Concrete
- Superior Adhesion
- Superior Chemical Resistance
- Easy Maintenance
- Thermal Shock Resistant
- Tolerates Dampness
- No Topcoat Required
- Meets USDA, FDA and OSHA
- standards

YIELD/COVERAGE

- 32 sq. ft. at 3/16"

PACKAGING

- 5 gallon unit

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.

MIXING AREA

Select a suitable mix area and protect the floor surface from accidental resin spillage with a layer of cardboard and/or plastic sheet. Provide enough space for free unimpeded movement for mixing activity. The more comfortable your surroundings in the mix area, the less likely your mixers are to have an error. Have all necessary tools ready: slow speed drills, mix and measure containers, etc. ***Do Not Start Mixing Materials Until Ready for Immediate Use.*** Once hardener and resin are combined, it must be used immediately. Prior to mixing apply masking tape wherever coating is intended to stop. Keyed edges must be installed at edge termination points to protect the material from chipping damage and to obtain a clean, straight edge.

APPLICATION METHOD/SPREAD RATES

Mortarthane™ SL should be applied to a pre-primed area at the required thickness by using a steel-bladed trowel or pin rake. Spiked rolling should be carried out within 3

minutes of application in order to avoid interfering with film gel time.

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 allocated for this function. **Do Not Mix Until Ready for Immediate Use.**

JOINT TREATMENT

Control joints and expansion joints can be treated several ways depending on traffic loads, temperature, movement in substrate and ability to repair a crack should one occur in a finished floor. Joints that have already cracked and have no potential for movement can be pre-filled with a mixture of Garonseal™ HCR and aggregate. Joints that might have the potential for movement can be filled with Tigerflex™. It should be noted that if a joint moves, there is the potential for a crack to transfer through the finished floor. It is up to the facility owner to decide if this is acceptable. The safest way to install the joint is to saw cut through the finished floor, install a
backer rod and fill the joint with Joint Guard™. Holes may be patched with Treflite™**.** Prime with Garon Prime™. Do not allow primer to puddle during repairs. Allow all patches and joint materials to cure dry before proceeding with installation of the **Mortarthane™ SL** floor.

PRIMING

Priming or sealing of the substrate is not required. On oily concrete slabs, Tigerclean™ XT is recommended.

APPLICATION METHOD

Mortarthane™ SL is applied by "Pin Rake" or "trowel method". **Mortarthane™ SL** is typically applied at 3/16"-1/4" thickness. Please note that joint lines will show in the finished floor. Lay out installation in sections to allow full width to be finished in 12 minutes or less (@70°F) from the time aggregate
is added to the mix to assure absence of placement lines.

A. Prepare the surface as outlined above.

B. **Mortarthane™ SL** is supplied in pre-measured units consisting of one pail of resin, one jug of hardener and one bag of aggregate (powder). Pour resin into large mixing vessel; scrape bottom and sides to assure all pigment is transferred. The resin and hardener should be added to a pail mixer and pre-blended for approximately 30 seconds. **A Jiffler or Bird Cage mixer is <u>not recommended</u> for this product**, however a low speed <500rpm high torque power drill and spiral mixing blade may be used. Gradually add aggregate until a homogenous mix is attained. (Approximately 1 minute). Move the blade back and forth and scrape <u>the bottom and sides of the pail while mixing.</u> <u>This is very important!</u> **Thorough Blending Is Mandatory.** A properly mixed batch applies easier and has a uniform surface appearance.

C. Incomplete mixing will cause an inconsistent finish or possible blistering.

D. Have two mixing buckets that are rotated to assure minimum time between mixes. Clean mixing blade and pail regularly to avoid mixing fresh material with older batches. Apply material immediately after mixing.

E. Pour the entire mixture onto the floor and spread with a 24" pin rake set at 1/8" higher than the applied thickness of the screed. Each unit should cover 32 square feet at 3/16". To avoid transition lines between mixes, it is very important that the material is poured directly onto the wet edge.

F. When applying on level or surfaces sloped up to ¼"/foot, the product is used as supplied. For more steeply sloped surfaces such as ramps that are up to 4 inches/foot, adding 1 gallon of Garon Grit™ 30 to each mix will prevent sagging while still providing a uniform surface after pin-rolling. Addition of a lesser amount of Garon Grit™ 30 may be beneficial when attempting to maintain a long wet edge without the material flowing out too thin.

G. Check pin rake every 1000 sq feet for pin wear. Adjust or have new rake ready to avoid interruption in process.

H. Trowel edges, drains and around equipment supports with an even pressure and a low angle trowel in a sweeping motion to complete troweling. This ensures that new batches of material are blended together with no transition lines for continuity of finish.

I. Immediately roll with a spiked roller with minimum 15/16" pins to eliminate lines and help release air.

J. Spike Rolling must be completed immediately after leveling of material to eliminate any residual roller marks in the finished surface (Within 12 minutes of mixing @ 70° F).

Continue Below for Broadcast Aggregate Method of Mortarthane™ SL

K. Broadcast Garon Grit™ 30 into **Mortarthane™ SL** while wet. The aggregate must be broadcast UP into the air while dispersing evenly and vertically at an approximate rate of 1 pound per sq. ft. into the wet surface. Apply at a rate of two mixes behind the wet edge, ensuring that the surface is completely covered. Broadcasting should be completed within 15 minutes of mixing each batch. Do not spike roller areas that have been broadcast.

The time window at which Mortarthane™ SL is broadcast is extremely critical:

- at 80°-90° F you have 12 minutes in which to broadcast
- at 70°- 80° F you have 15 minutes in which to broadcast
- at 55° - 65° F you have 17 minutes in which to broadcast

(Too early and the surface may become uneven. Too late and the aggregate may not penetrate into the matrix surface. Allow to cure for a minimum of 10 hrs. @ 70º F). Remove excess aggregate by brush. (Do not sand).

PREPARATION OF PLYWOOD FOR APPLICATION OF MORTARTHANE™ SL

1. Plywood should be new and free of contamination (clean and dry). Marine grade plywood is recommended.

2. Installations over existing concrete or substrates with a possible chance of moisture contamination transfer should be isolated using a polyethylene vapour barrier; all joints should be taped according to manufacturer's instructions. Raised platforms should have consideration for airbricks in outside walls to reduce the risk of dampness.

3. It is recommended that 2 layers of plywood be installed offset at joints to

reduce flexing between joists. Plywood should be at least ¾" thick.

4. Plywood should be positively fastened with high quality construction adhesive and recessed screws at 6" on centre screw pattern.

5. Bandage joints using Tigerflex™ 100% solids epoxy embedding a minimum of 8" of Close weave fibreglass matting into the wet resin.

6. All keyways should be installed by using a Skill type saw with a ¼" wide blade set to ¼" deep. (Concrete diamond cutting blades will burn and not cut wood)

7. Any drain detail must be keyed a minimum of 2 inches away from the drain edge with the outside exposed edge removed to a slope using a wood chisel. Doorway thresholds should be treated in a similar way to allow a smooth transition for the termination of the material.

8. Details such as cold joints should also be cut using a Skill saw detail as per concrete CAD drawing detail.

9. Plywood should be thoroughly vacuumed prior to installation.

CURING

Allow a minimum of 8 hours cure before light foot traffic at 70 ° F, and a minimum of 24 hours is required at 50ºF. Additional time must be allowed for heavier loads or lower temperatures.

SLIP & FALL HAZZARDS

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. **Be aware of the full cure time. Do not open the area to normal service, harsh industrial chemical or abusive use before the coating is fully cured.**

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.

MAINTENANCE

Regular scrubbing will maintain these systems in serviceable condition as long as contamination is not allowed to build.

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, SDS 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 SDS** 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. Workers should wear protective clothing consisting of splash-proof goggles, impermeable gloves and where exposure limits are exceeded, organic vapor respirators should be used. Adequate cross ventilation should be provided. Any worker with sensitivity to isocyanides should not be exposed to this product. Use only as directed. **CALL GARON FOR ISOCYANIDES SAFE HANDLING MANUAL AT 800-631-5380.**

STORAGE CONDITIONS

Mortarthane™ SL must be stored dry. Exposure of the aggregate (Part C) to moisture for an extended period will cause lumps. Do not allow resins to freeze. Frozen (crystallized) hardener must be heated above 100°F to melt crystals. The shelf life is 6 months from the ship date in the original unopened containers.

LIMITATIONS

- Exposure to ultraviolet light will change the color of **Mortarthane™ SL**. Sunlight and metal halide lighting will cause yellowing without affecting the performance. Many acids will cause a bleaching of pigment without affecting performance.
- Do not apply at a temperature below 50°F (10°C) or above 85°F (29°C). **Mortarthane™ SL** can be slippery when wet. Do not apply to un-reinforced sand cement screeds, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, aluminum, polyesters or elastomeric membranes.
- The user is responsible for proper application.

CHEMICAL RESISTANCE

Mortarthane™ SL has excellent resistance to organic and inorganic acids, alkalis, fuel and hydraulic oils, aromatic and aliphatic solvents.

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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