ATECH PLUS
Waterproofing Solutions

UROFLOOR APPLICATION GUIDELINES

Atech Solutions Pty Ltd has prepared this application guide to assist applicators in the use of Urofloor products for the Traffic Deck, Waterproofing and allied systems. Any reference to consumptions are approximate since consumptions will vary according to existing techniques. Before commencing any work, the applicator must become familiar with all product installation procedures.

Mixing of Materials

Urofloor products come pre-proportioned. All color components must be premixed for pigment distribution. Pour the bottle component into the center of the pail component and mix thoroughly for approximately two (2) minutes. Then scrape down the sides of the pail and continue mixing for one (1) additional minute. Materials should be mixed with a jiffy paddle at low speed (400-600 rpm). Take care not to introduce air into the product. After mixing, material should be consistent in color.

Pot Life

The pot life of Urofloor products is normally set at a temperature of 20°C. Pot life will vary with temperature and humidity change.

- Urofloor GPX 30 minutes
- Urofloor WP/WP Thixo 25 minutes
- Urofloor SL 30 minutes
- Urofloor UV Gloss 20 minutes

Pouring Materials

When pouring materials out of the pail, use only the material which flows naturally. Do not scrape the side or bottom or the pail. Also, do not invert pails on substrate and allow to fully drain as the residual material is often incompletely mixed and may result in incomplete cure.

Concrete Slab Restoration

Spalls, delaminations, pot holes, scaling, pop outs, and other defects in the concrete must be repaired and all projections must be leveled prior to the commencement of floor installation.

Surface Preparation

Prior to commencement of the floor application, the existing surface must be clean, sound, dry and free of oils and other bond inhibiting contaminants. Use of mechanical methods such as shot blasting, sandblasting or hydroblasting are recommended to produce a clean and lightly textured surface. When hydroblasting, allow 24 hours for substrate to dry completely. Profile textures will affect material consumptions. Prior to applying each layer of the flooring system make sure the previous layer is clean and dry.

Detail Preparations

System Termination

Cut or route a maximum 6mm. wide by 6mm. deep slot in the slab at the designated termination line. Mask off the termination edge of the slot. Apply coatings leaving sufficient thickness to key in the top coat. Allow the top coat to remain level with the substrate at the termination edge.

Moving and Non moving joints and cracks (<1.6mm)

Apply the mixed Urofloor GPX primer at 0.10 to 0.15mm thickness to a minimum of 75mm. wide on both sides of the joint or crack. Broadcast to excess with 30-70 mesh sand and allow the primer to cure, typically 1 to 2 hours. Remove any excess sand by brooming, vacuuming, or blowing with oil-free air. Apply the mixed Urofloor WP Thixo detail coat at 0.75mm thickness taking care to ensure both filling and overlapping of the joint or crack 50mm. on each side. Tool to a featheredge. Continue with surface work when detail coat becomes tack-free, typically 3 to 4 hours and not longer than 24 hours.

Moving and Non moving joints and cracks (>1.6mm)

Cut or route out joints and cracks to a minimum of 6mm. wide by 12mm deep. Install a backer rod or bond breaker tape to prevent three sided adhesion and fill with a high quality polyurethane elastometric sealant. When sealant has cured according to manufacturer's recommendations, apply the mixed Urofloor GPX primer at 0.10 to 0.15mm thickness to a minimum of 75mm. wide on both sides of the joint or crack, taking care to avoid applying primer

to the cured sealant. Broadcast to excess with 30-70 mesh sand and allow the primer to cure, typically 1 to 2 hours. Remove excess sand by brooming, vacuuming, or blowing with oil-free air. Apply mixed Urofloor WP Thixo detail coat over the joint crack at 0.75mm thickness and featheredge. After the repair becomes tack free, typically 3 to 4 hours and not longer than 24 hours, continue surfacing work.

Joints(>25mm)

In order to achieve the overall waterproofing characteristics of the coating systems, all expansion/contraction joints should be resealed. This process should be completed with high quality polyurethane elastometric sealants and /or joints. Expansion/contraction joints >25mm must never be overcoated with the coating systems. To achieve their designed performance, both the joints and deck coating must act independently while forming a continuous barrier.

All joints> 25mm wide receiving a high quality polyurethane elastometric sealant or a prefabricated –type joint system must have smooth, sound, waterproof joint nosings to develop proper adhesion and to maintain the continuous barrier system. Use Epofloor GPX epoxy mortar binder to prepare an epoxy mortar to facilitate quality joint nosings. New joint nosings should be a minimum of 12mm wide by 12mm deep and filled with the epoxy mortar. Support the inside face of the nosings with a sturdy form wrapped in polyethylene film. Apply a prime coat of the mixed Epofloor GPX to the properly prepared nosing substrate at 0.10 to 0.15mm thickness. While the prime coat is still wet, apply the epoxy mortar, which is a blend of the mixed Urofloor 102 epoxy mortar binder and a 20-40 mesh sand. This mixture is made by slowly adding 4 parts by loose volume of sand to 1 part volume of mixed epoxy mortar binder. Mix with a low speed (400-600 rpm) drill and jiffy mixing paddle for 3-5 minutes until uniform in consistency. Apply the epoxy mortar into the nosings, properly consolidated, and smooth with a finishing trowel level to the existing substrate. Allow to cure for 12 hours and remove all form work. Install and cure the sealant or joint system according to manufacturer's recommendations. Provide deck system termination as described under system termination.

Floor/Wall Joints: Bearing

After proper surface preparation, place a 6 mm. diameter backer rod at the junction of all vertical and horizontal surfaces. Using a high quality polyurethane elastomeric sealant, install a cove joint. Maintain a minimum 6mm sealant thickness measured at the center point of the joint. Allow sealer to cure according to manufacturer's recommendations. After masking all walls, curbs, columns, and other vertical penetrations 100mm above the slab, apply the mixed Urofloor GPX primer at 0.10 to 0.15 mm thickness,100 mm wide on the vertical and 75 mm on the slab taking care not to coat the cured sealant. Broadcast to excess with 30-70 mesh sand and allow the primer to cure, typically 1 to 2 hours. Remove excess sand by brooming, vacuuming or blowing with oil-free air. Apply the mixed Urofloor WP Thixo detail coat at a 0.75mm thickness in a band over the cured sealant and extending 100 mm. on the vertical and 50 mm. on the slab from the sides of the joint. Feather edge the deck. After the detail coat becomes tack free, typically 3 to 4 hours and not longer than 24 hours, continue with the coating system.

Floor/ Wall Joints: Non-Connected

Install the correct diameter backer rod in the joint at a minimum depth of 12mm measured at the center of the joint. Fill with a high quality polyurethane elastomeric sealant and allow to cure according to the manufacturer's recommendations. Mask all walls, columns, curbs, and other non-connected penetrations 100 mm above the deck. Apply the mixed UROFLOOR GPX primer at 0.10 to 0.15mm thickness, 100 mm wide on both sides of the joint, taking care not to coat the cured sealant. Broadcast to excess with 30-70 mesh sand and allow the primer to cure, typically 1 to 2 hours. Remove excess sand by brooming, vacuuming or blowing with oil-free air. Place a sheet of 1 mm thick, pre-cured, commercial grade, non talc dusted neoprene over the cured sealant and extend the sealant 50 mm on both sides of the joint onto the primed area. Apply a 0.75mm thickness of the mixed Urofloor WP Thixo detail coat over the neoprene sheet and extend the coating 50 mm beyond the sheeting edges. Smooth the detail coat to a feather edge on the slab. Remove all masking before the coating has cured. After the detail coat becomes tack-free, typically 3 to 4 hours and not longer than 24 hours, continue with the coating system.

Penetrations

Apply the mixed Urofloor GPX primer to the substrate at 0.10 to 0.15 mm thickness. After masking 100 mm in either the vertical or downward direction and 75 mm on the slab, broadcast to excess with 30-70 mesh sand and allow the primer to cure, typically 1 to 2 hours. Remove excess sand by brooming, vacuuming or blowing with oil-free air.

If a void of <1.5 mm is present, apply the Urofloor WP Thixo detail coat over the cured primer 100mm on the vertical or downward direction and 50mm on the slab at a 0.75 mm thickness over the void. Work the material into the void, featheredge on the slab and remove all masking.

For reglets or voids >1.5 mm, fill with a high quality polyurethane elastomeric sealant and allow to cure a ccording to the manufacturer's recommendations. Care should be taken to keep the surface of the cured sealant free of primer. Apply the Urofloor WP Thixo detail coat over the cured primer 100 mm on the vertical or downward direction and 50 mm on the slab at a 0.75 mm thickness over the joint. Featheredge the detail coat on the slab. Remove all masking before the coating has cured. After the detail coat becomes tack-free, typically 3 to 4 hours and not longer than 24 hours, continue with the coating system.

Primer Coatings

To the properly prepared substrate, liberally spread the mixed Epofloor GPX or Urofloor GPX primer using high quality rollers or flat squeegees, allowing the material to saturate into the hairline cracks while removing the excess to an unprimed area and repeat the procedure. Into the still wet primer, seed 20-40 mesh sand at approximately 25 kg./100 m^2 evenly over the area. Allow the primer to cure.. Remove excess sand by brooming, vacuuming or blowing with oil-free air.

Membrane Coat

After the primer and any detail applications have cured to tack-free, but no longer than 24 hours, apply the mixed Urofloor WP membrane coating evenly at the required thickness using a high quality roller, notched trowel or squeegee. Do not overwork the material. This can cause excessive entrapped air.
Use a spiked urethane roller to remove air in the membrane by backrolling within 10 minutes of its placement

NEVER ADD SAND TO THE MEMBRANE COAT OF THE SYSTEM.

Binder Coat

After the primer or membrane has cured, but no longer than 24 hours, apply the specified mixed Urofloor binder (coating) evenly at the required thickness using a high quality roller, notched trowel or squeegee. Do not overwork the material. This can cause excessive entrapped air. Once the binder has leveled, broadcast with the specified sand to excess and allow the binder to cure. Remove all excess sand by brooming, vacuuming or blowing with oil-free air. This process may be repeated depending upon the specified surface.

Top Coatings

There are two types of Urofloor top coatings. Urofloor SL and Urofloor UV Gloss are applied to assist in the build up of a system.
To apply Urofloor SL and Urofloor UV Gloss as a top coating, the binder or primer coats must be cured, but no longer than 24 hours. Apply the specified Urofloor evenly by using a high quality brush, roller or squeegee at the specified thickness. Broadcast the specified sand into the wet surface and then backroll with a high quality roller slightly wetted with the top coating.

Limitations

- Do not apply over damp or wet substrates.
- Do not apply to surfaces during the out-gassing of vapor.
- Minimum application and curing temperature is 4°C.
- Maximum substrate temperature is 48°C.
- Substrate temperature must be a minimum of 4°C above the dew point.
- Do not apply during inclement weather or when it is anticipated.
- The proper design, use, and placement of isolation, control, and construction joints must be provided for the anticipated movement of the slab.
- Do not use on sandwich or split slabs with a buried membrane, on slabs over unvented metal pan, or on epoxy resin bonded patches or overlays.
- The systems are not intended for tire chain or metal studded tire traffic.
- Urofloor SL will discolor when exposed to UV.

Coverages

Actual coverage rates are dependent upon a variety of factors relative to the field application. The installer must assess the conditions prior to ordering material. With 100% solids material one (1) wet mm will equal one (1) dry mm. For those materials containing solvents the dry mm yield will be proportionately reduced by the percentage of solvents. Generally, one (1) litre of 100% solids material will cover 1 m^2 at one (1) mm thickness. But allowances must be made for waste in mixing and pouring as well as field conditions.

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Health & Safety Information

Consult the product Material Safety Data Sheet (MSDS) and product label for complete information.

Maintenance

Urofloor products can be cleaned with commercial detergents. It is desirable to establish an agreement between the owner and applicator to provide periodic inspection and repairs to enhance longevity of the system.

Warranty

Atech Solutions Pty Ltd warrants its products to be free of manufacturing defects and to meet published physical properties when applied, cured and tested in accordance with ATECH standards.

THIS WARRANTY IS IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THIS PRODUCT. NEITHER SELLER NOR SUPPLIER SHALL BE LIABLE FOR ANY LOSS OR DAMAGE EITHER DIRECT, INCIDENTAL OR CONSEQUENTIAL, REGARDLESS OF LEGAL THEORY ASSERTED INCLUDING NEGLIGENCE; MERCHANTABILITY AND/OR STRICT LIABILITY.

Seller's and Supplier's obligation shall be to replace such quantity of product to be defective. Before using, user shall determine suitability of product for his intended use and user assumes all risk and liability whatsoever in connection therewith.

Field Support

Field support where provided, does not constitute supervisory responsibility. Suggestions made by ATECH either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they and not ATECH are responsible for carrying out procedures appropriate to a specific application.

Customer Responsibility

The technical information and application advice given in this publication is based on the best information available at time of print. As the information herein is of a general nature, no assumption can be made as to the products suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.

Safety Precautions

These products may cause allergic reactions through skin contact, goggles, protective gloves and overalls must be worn. Ensure that there is adequate ventilation and avoid breathing the vapour.
KEEP OUT OF REACH OF CHILDREN. KEEP FROM FREEZING.

Exclusion Clause

1. The information contained in this data sheet is based on many years experience and is correct to the best of our knowledge. ATECH will be under no liability whatsoever whether in:
   a) Contract or tort (including, without limitation, negligence)
   b) Breach of statute
   c) Any other legal or equitable obligation other than the quality of the product at the time of despatch.
2. Any queries about specification use or application should be directed to our technical service department immediately.
3. This exclusion clause does not operate to exclude any warranty that by law may not be excluded.