



Cementitious and Resin Flooring Systems

*Mapefloor*TM CPU: Maintenance Instructions

Mapefloor CPU flooring systems are designed to be extremely durable, abrasion-resistant and attractive. Still, floor surfaces are exposed to the greatest degree of wear of any building surface. A degree of preventative maintenance is required to protect your investment in the new floor surface. A regiment of routine cleaning and conscientious personnel awareness will extend the service life of the floor.

The service life of a *Mapefloor CPU* flooring system depends on the weight and intensity of the traffic flow that the floor experiences. It also relies on periodic visual inspections, planned maintenance (including a cleaning regimen), and repairs to both the flooring system and concrete substrate.

For more specific maintenance guidelines, consult ACI 503.3 (“Standard Specification for Producing Skid-Resistant Surface on Concrete by the Use of a Multi-Component Epoxy System”), ACI 548.8 (“Specification for Type EM [Epoxy Multi-Layer] Polymer Overlay for Bridge and Parking Garage Decks”) and the International Concrete Repair Institute’s “Guide for Design, Installations, and Maintenance of Protective Polymer Flooring Systems for Concrete.”

Daily cleaning procedures

Dust and debris can build up to become an abrasive material when left on the floor surface. Constant wheel traffic in combination with the dirt and debris can act like sandpaper to dull, scratch or gouge the floor surface. Following these recommendations will minimize the effects of dirt and debris:

- Clean daily with a broom, dust mop or a power sweeper to remove all dust and debris.
- As part of the daily washing process, use a concentrated water-soluble neutral detergent – composed of a low-foam-forming mix of surfactants – for all washable surfaces, especially surfaces that are exposed to heavy traffic. The surfactants must be at least 90% biodegradable. And the detergent must be used with floor-washing machines that utilize felt pads (such as the white and green pads from 3M Scotch Brite.)
- For an effective daily cleaning agent, you may use a detergent solution to clean the floor surface.

- The best way to use a detergent solution is to pour it on the floor surface, let it stand it for at least 5 minutes, and then use a floor-washing machine with a felt pad. By pre-treating the floor with the detergent before using the machine, you allow the detergent to saturate the surface, therefore making it easier to clean.
- Do not clean with such chemicals as acetone, acetic acid, hydrochloric acid (or other acids such as fluoridric, formic, phosphoric, nitric or sulphuric) or alcohol, ammonia, benzene, dimethylformamide, ethylbenzene, methanol, xylene, etc. These substances can give the surface a matte appearance, or can cause discoloration or color variation of the resin coating.
- Matte surfaces are in general harder to clean than glossy surfaces, and may require more attention and time for cleaning and washing procedures.
- *Mapefloor CPU* flooring systems by themselves will not support the growth of microorganisms and are capable of withstanding severe cleaning regimes.
- Clean the installed *Mapefloor CPU* flooring system with a 1,200-psi (or 80-bar) pressure washer and detergent solution to remove surface debris as well as any residual liquid contaminants. Start from the lowest pressure setting and gradually increase the pressure until the desired result is obtained. A stiff-bristle broom or scrubbing machine may be used for areas with excessive buildup or on areas that are difficult to clean. Rinse the floor thoroughly with clean, potable water and vacuum-dry to remove loose contaminants. Collect and dispose of effluent waste in accordance with local, state/provincial and federal regulations.

Inspections

On walk-through inspections, observe and document the general appearance and cleanliness of the installed coating, giving particular attention to heavy-wear areas such as loading bays, areas subject to hot liquid or chemical discharge, corners, ramps and turn lanes. These inspections will form the basis for any preventative maintenance required and should be performed monthly (or semi-annually at minimum) or with greater frequency should the environment require it.

Monthly inspections should include visual assessment of any physical damage to the *Mapefloor CPU* flooring system, which should be documented and repaired quickly to prevent further damage or as deemed necessary. A semi-annual



inspection should be more comprehensive and include, but not be limited to, the following:

- Watch for proper flow of water to drains, culverts or scuppers. Identify any stained areas, indicative of standing water, particularly in freeze/thaw climates. Inspect from the underside, if possible, for evidence of cracks or leaks.
- Inspect all existing penetrations and expansion joints to ensure that they are properly sealed and that there is no loss of elastic properties or separation from adjacent substrates.
- Observe critical flooring junctures – such as plinths, parapet and building walls, curbs, columns and bumpers – to determine whether any excessive structural movement may have caused cracking in the *Mapefloor CPU* flooring system.
- Look for any wear, tears, cracks or loss of adhesion in the topcoat. Determine whether the membrane or body coat is affected or compromised. Observe and document whether any low spots exist where ponding has or could occur.
- Inspect the deck coating for stains from oil, grease or other fluids. Spot-remove such stains with an appropriate cleansing method, such as a general-purpose oil-removing compound, liquid detergent or bleaching solution. Firmly scrub the affected areas to remove all contaminants. Limit the use of compounds containing high amounts of volatile organic compounds (VOCs).

Special maintenance

- When the floor surface is covered in heavy debris, use a floor-washing machine with a felt pad that contains diamond micro-granules (such as Twister pads from HTC in Sweden). The felt pads are available in different types, ranging in ability from removing resistant marks (such as skid marks from tires) to polishing the old resin floor surface.



- The softest felt pads can be used on a daily basis to remove non-resistant stains. The hardest felt pads are used to remove resistant stains or to polish old resin coatings that develop a matte appearance.

General recommendations

- Remove all spillage and contaminants from the floor surface as soon as possible.
- Inspect the flooring periodically assess the coating's condition. While the waiting time between inspections will depend on the flooring use and traffic levels, inspections on at least a semi-annual basis are advisable.
- On a daily basis minimally, clean and wash the surfaces that come into contact with grease, blood, food or any other material that can favor bacterial growth. Use of sanitizers is advisable, but ensure that a preliminary test is conducted on a small area before sanitizing the full surface.
- Do not use solvents or strong abrasives to clean the surface.
- Repair all scratches, cracks, holes, etc., as soon as possible. For details, refer to MAPEI's installation guide "*Mapefloor CPU: Contractor Repair Instructions.*"
- Rough surfaces (such as with sand broadcast systems) can be washed using floor-washing machines with specific brush discs. Use only synthetic wire discs and never metallic brush discs.

For additional information, consult the technical documentation at www.mapei.com or your MAPEI technical representative.

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