

SECTION 1

TOOLS

TPS Diamond Polishing System

The TPS System is a coordinated metal and resin bonded diamond system to perform grinding and polishing of new Epoxy Terrazzo using any of the eight models of Prep/Master® machines. The TPS System is only to be used dry for steps #1, #2 & #3 and wet only for steps #4, #5, #6 & #7 and in sequence as numbered by tools #1 through #7. All tools are painted orange or use orange Velcro to indicate a matched system. (See Section 3 for Epoxy Terrazzo floor qualifications to verify if the TPS system is appropriate to the Epoxy Terrazzo that is to be rough cut and polished.)

TPS #1

This is a metal bond tool painted orange that has pictured face design and can be clearly identified by the number on back as "#1." This tool features the patented EG attachment system. The tool is run dry.



- Approximate life of #1 is 12,000 SF / 1,115 M² for all P/M Machines except 4430. (P/M Machine 4430 life expectancy is 15,500 SF / 1,440 M².) This tool is the first cut tool for Epoxy Terrazzo rough cut step. The #1 TPS tool life will be variable based upon Epoxy Terrazzo mixture components, consistency of epoxy terrazzo placement, and adequate dust collection.

#1 - 640900001

TPS #2

This is a metal bond tool painted orange that has pictured face design and can be clearly identified by the number on back as "#2." This tool features the patented EG attachment system. The tool is run dry.



- Approximate life of #2 is 30,000 SF / 2,787 M² for all P/M Machines except 4430. (P/M Machine 4430 life expectancy is 40,000 SF / 3,716 M².)

#2 - 640900002

TPS #3

This is a metal bond tool painted orange that has pictured face design and can be clearly identified by the number on back as "#3." This tool features the patented EG attachment system. The tool is run dry.



- Approximate life of #3 is 30,000 SF / 2,787 M² for all P/M Machines except 4430. (P/M Machine 4430 life expectancy is 40,000 SF / 3,716 M².)

#3 - 640900003

TPS #3.5 (Grout Pan)

Grout Pan #3.5 is a patent pending stainless steel tool that has the pictured face design and can be clearly identified by the stamping on back as "#3.5." This tool features orange Velcro backing. The tool is run using epoxy and marble flour (calcium carbonate powder). (See execution for important details of how to use properly.)



- Approximate life of #3.5 is 10,000 SF / 929 M².

#3.5 - 640900035

TPS #4

This is a resin bonded tool that has the pictured face design and can be clearly identified by the number on back as "#4." This tool features orange Velcro backing. The tool is run wet.



- Approximate life of #4 is 15,000 SF / 1,394 M² for all P/M Machines except 4430. (P/M Machine 4430 life expectancy is 20,000 SF / 1,858 M².)

#4 - 640900004

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TPS #5, #6, & #7

These are resin bonded tools that have the pictured face design and can be clearly identified by the numbers on back as “#5,” “#6,” & “#7.” These tools feature orange Velcro backing. The tools are run wet.



#5 - 640900005



#6 - 640900006



#7 - 640900007

- Approximate life of #5, #6 & #7 are 15,000 SF / 1,440 M² for all P/M Machines except 4430. (P/M Machine 4430 life expectancy is 20,000 SF / 1,858 M² each.)

Execution

See Section 3 for general guidelines for safe and productive use of the Prep/Master machines.

Since a portion of the TPS System is performed wet, its use should only be by those familiar with all safety and productive work practices while using water.

1. Attach the TPS #1 tools to the P/M Machine and place it in operating position. Attach appropriate power* and vacuum dust collection hose to the P/M machine. With 100% of weights on head of machine, set speed to 40Hz on VSD and start machine (for propane, run at 2350 RPM). Upon satisfactory completion of step #1, remove machine from area and vacuum the surface.
2. Attach the TPS #2 tools to the P/M Machine and place it in operating position. Attach appropriate power* to the P/M machine. With 100% of weights on head of machine, set speed to 40Hz on VSD and start machine (for propane, run at 2350 RPM). Upon satisfactory completion of step #2, remove machine and vacuum clean.
3. Attach the TPS #3 tools to the P/M Machine and place it in operating position. Attach appropriate power* to the P/M machine. With 100% of weights on head of machine, set speed to 40Hz on VSD and start machine (for propane, run at 2350 RPM). Upon satisfactory completion of step #3, remove machine and vacuum clean.
4. Grout the floor with approved epoxy grouting material by either traditional method using marble flour (calcium carbonate powder) and a steel trowel, or with the STI Grout Pans (TPS #3.5) on P/M machine (or similar rotary machine) with marble flour. Let dry a minimum of eight hours. *Please note: the STI Grout Pans can only be run on the P/M machine at 15Hz (electric) or 2100 RPM (propane) with the pocket weights on the handle. Not running as recommended will greatly reduce pan life expectancy and may produce burn marks in the floor. Never use the pans on machines that have RPM in excess of 2500 RPM tool speed.*
5. Attach the TPS #4 tools to the P/M Machine and place it in operating position. Attach appropriate power* to the P/M machine. With 50% of weights on head of machine and 50% in basket over wheels, set speed to 45Hz on VSD and start machine (for propane, run at 2500 RPM). Upon satisfactory completion of step #4, remove machine from area and wet vacuum or auto-scrub the concrete clean.
6. Attach the TPS #5 tools to the P/M Machine and place it in operating position. Attach appropriate power* to the P/M machine. With 50% of weights on head of machine and 50% in basket over wheels, set speed to 45Hz on VSD and start machine (for propane, run at 2500 RPM). Upon satisfactory completion of step #5, remove machine from area and wet vacuum or auto-scrub the concrete clean.
7. Attach the TPS #6 tools to the P/M Machine and place it in operating position. Attach appropriate power* to the P/M machine. With 50% of weights on head of machine and 50% in basket over wheels, set speed to 45Hz on VSD and start machine (for propane, run at 2500 RPM). Upon satisfactory completion of step #6, remove machine from area and wet vacuum or auto-scrub the concrete clean.

* See Section 3 for qualifications.

SECTION 2

EXECUTION

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SECTION 3

QUALIFICATIONS

8. Attach the TPS #7 tools to the P/M Machine and place it in operating position. Attach appropriate power* to the P/M machine. With 50% of weights on head of machine and 50% in basket over wheels, set speed to 45Hz on VSD and start machine (for propane, run at 2500 RPM). Upon satisfactory completion of step #7, remove machine from area and wet vacuum or auto-scrub the concrete clean.

QUALIFICATIONS

As a general rule for all operations using the Prep/Master® machines:

- The machine manual **MUST** be read and understood by any operator for the safe and productive use of the machine.
- The use of the machine and water must only be done by skilled workers that have been trained and understand the safety precautions that need to be undertaken. The danger of electric shock is present anytime water is used with electrical machinery. Water also presents the possibility that any floor openings or drains can serve as a conduit for water to damage unintended areas. The disposal of wet waste or slurry must be done in accordance with all local laws and regulations.
- Upon starting the machine, continuously move the machine in a side-to-side pattern ensuring that the machine will grind the floor evenly. If for any reason the machine cannot be continuously moved, i.e. cord management, adjacent work, obstacles, etc., stop the machine until it can be operated as specified.
- When cutting a new epoxy terrazzo floor, installation flatness will affect production greatly. The TPS #1 tool is specified as the "first cut" tool since it is the most aggressive in the system and designed to quickly remove floor stock. As such, any new floor must be ground to full aggregate exposure using the TPS #1 tools before commencing with subsequent steps. Being that subsequent steps are finer than #1, these tools cannot be expected to perform any more aggregate exposure; only to remove scratches from previous steps.
- A thorough processing of the epoxy terrazzo can only be achieved by one pass forward and then second pass backward over same path. It is compulsory to overlap paths by at least 25%. The machine must always be swung side-to-side approximately 30 degrees. The machine should never be quickly pushed across floor to move to areas outside the area that is to be polished.
- The work area must be closed to all non-associated workers and equipment. The likelihood of contamination by unassociated traffic is increased and rogue scratches will be possible as well as overall reduced polish.

Flooring Condition Qualifications

Use of the TPS Tool System requires that the epoxy terrazzo floor is at least eight hours old. As a general rule, it is best to inspect floor **BEFORE** beginning to note or mark obstacles such as floor drains, protrusions from floor.

Any polishing project that is undertaken should **ALWAYS** be preceded by a mock-up of at least 100 SF / 9 M². This mock-up will serve two purposes: to provide a finished sample that owner can approve.

Machinery Qualifications

The TPS Tool System is designed to attach to and work perfectly with any Substrate Technology Prep/Master® machine. Quantity of TPS Tools will vary by model:

- Prep/Master® Jr. & 2807/2818LP: 6 pieces
- Prep/Master® 2420/2418LP: 12 pieces
- Prep/Master® 3030/3038LP: 12 pieces
- Prep/Master® 4430/4438LP: 24 pieces

Attachment of TPS Tools #4 through #7 require Velcro pad adapters 570000031 & 570000026.

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