Production Of Flexible PU Mould Liners From Rigid PU Patterns

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**Production Of Flexible PU Mould Liners From Rigid PU Patterns**

**Stages 1-3:** Making a rigid PU copy of your original stone pattern

1. Mount natural master on a board using silicone cartridge adhesive.
2. Seal around edge of pattern to prevent liquid PU flowing under the pattern.
3. Fabricate a wooden surround to help create a reservoir for the PU.
4. Seal all surfaces – wood and pattern with Duramould pattern sealant – (ref 7989264).
5. Apply a coat of Mscil across all surfaces to aid release.

**Stage 4:** Multi Mould Production using your rigid PU patterns

**Stage 5:** Reproduce the original in Precast concrete

**Equipment**
- Hardwood Timber e.g plywood
- Silicone adhesive/sealant
- Duramould Pattern Sealant
- CIL Release Agent

**Stage 1**

*Mounting Your Original Stone Master Pattern On A Board*

1. Mount natural master on a board using silicone cartridge adhesive.
2. Seal around edge of pattern to prevent liquid PU flowing under the pattern.
3. Fabricate a wooden surround to help create a reservoir for the PU.
4. Seal all surfaces – wood and pattern with Duramould pattern sealant – (ref 7989264).
5. Apply a coat of Mscil across all surfaces to aid release.
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### Stage 2

**Making A Master Mould From Your Original Stone Pattern Using The Duramould ET 45A**

1. Weigh out equal parts of each component (Part A and Part B).
2. Mix thoroughly by hand or variable speed drill for 2 mins.
3. Transfer to a clean bucket for a final 1 min mix (helps prevent unmixed material in far reaches of bucket from spoiling mould).
4. Pour carefully over the back of the pattern prepared in stage 1.
5. Leave to cure (demould min 4 hours at 25°C – overnight cure).
6. The cured mould can be backfilled with Duramould EM 73D plus filler many times to reproduce the original master stone.

**Equipment**

- Clean buckets, spatula or suitable stirrer
- Weighing Equipment
- Sufficient Duramould ET 45A to cover the master

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### Stage 3

**Multiple Pattern Production With Rigid PU (Assists Productivity)**

1. Weigh out equal parts of Duramould Fastcast EM 73D system (Part A and Part B).
2. Weigh out 150 parts of Duramould Fastcast Filler (4650440) to 100 parts of EM 73D system.
3. Add 50% of the filler to Part A, mix thoroughly.
4. Add 50% of the filler to Part B, mix thoroughly.
5. Mix A+B thoroughly for a max of 90 secs before pouring into the Master Mould from stage 2.
7. Mount PU patterns onto boards plus surrounds as in Stage 1.

**Equipment**

- Clean buckets, spatula or suitable stirrer
- Weighing Equipment
- Sufficient Duramould EM 73D to fill the master mould
- Duramould Filler
- Hardwood Timber e.g. plywood

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*Note: If your pattern has several deep undercuts then a softer grade of Duramould is recommended e.g. Duramould ET30A – note new ratio.

* For all other filler types please refer to separate data sheets.
**Stage 4**

**Multiple Mould Production**

1. To improve productivity warm your mounted PU patterns to 20 - 40°C and apply your Macsil release agent.
2. Select a suitable grade of Duramould for mass mould production.
3. Pour or spray the appropriate grade of Duramould over the PU pattern and allow to cure.
4. Demould will be in minutes using the Duramould EMS machine sprayable systems, minutes using the Duramould SMX machine dispensable systems, or hours using the Duramould ET hand mixable systems.
   - For short demould times - use Duramould SMX or EMS Series
   - Hand mixing - use Duramould ET Series

**Equipment**

- Suitable equipment to machine process PU, or buckets, spatulas, scales, etc to hand mix.
- Oil Release Agent.

**Stage 5**

**Precast Concrete Reproduction**

1. Moulds should be left 7 days before entering production to allow full cure.
2. Apply a thin coat of a suitable release oil to the mould surface e.g. Duramould Release Oil (prod ref 7989265) to release concrete from the mould.

**Equipment**

- Duramould Release Oil (assists concrete release from mould).

**Note:** Avoid applying excess release oil to the mould or exposing them outside in the elements as this may reduce mould life.