

## Standard Specification for the application of Monopur SL Flooring system to concrete surfaces

Project:  
Prepared for:  
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### 1.0 PREAMBLE:

This specification is for the application of the hard wearing **Monopur SL Flooring System** to waterproof concrete floors such as wet processing areas, and food preparation zones. Designed for safety and durability the floor offers a combination of anti-slip profile for foot traffic, and chemical & temperature resistance for longevity.

The specification also deals with preparation of the surfaces before the application of the flooring system.

**Monopur SL Flooring System** is an antimicrobial, cementitious polyurethane resin floor. Available in three thickness options – 4mm, 6mm and 9mm.

### 2.0 SURFACE PREPARATION:

#### 2.1 General Responsibility:

Unless expressly agreed otherwise at time of contract pricing, all work in this section shall be the responsibility of the Main Contractor, whether carried out by his own staff, other sub-trades or the Specialist Finishes Sub-Contractor. In the latter case, such preparatory work shall be priced separately from work defined in Sections 3.0 - 6.0 inclusive.

#### 2.2 Concrete Preparation:

The substrate must be dry, firm, solid and free of residues of laitance, dust, grease, oil and other contaminants before coating. In case of serious oil contaminations, acetylene flame cleaning, followed by mechanical treatment, is required. Do not use solvents as a cleaning agent. Their use will drive fat/oil further into concrete compromising the adhesion of the **Monopur SL** flooring to the concrete.

The concrete must be cured for a minimum of 28 days. The cohesive strength of the concrete substrate must be greater than 1.5 N/mm<sup>2</sup> in average value. This can be checked by undertaking a pull-off test if required in accordance with:

**ASTM C1583 Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension – Pull-off Method.**

The concrete substrate shall be prepared with suitable methods such as diamond grinding or captive shot blasting. The surface must be cleaned with an industrial vacuum cleaner after treatment. The final prepared surface profile shall be CSP2, as defined in:

**ICRI Guideline No. 310.2R-1997, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays and Concrete Repair.**

For new concrete floors, good water curing under polythene is recommended. Liquid or spray applied concrete curing compounds shall not be used.

The humidity on the surface of the concrete must not exceed 4% and the substrate temperature should be at least 3°C above the dew point at the time of application. Do not apply when atmospheric condensation is occurring or likely to occur before full system cure is obtained.

**Note: Contact Equus Industries Ltd for a further preparation methodology if required prior to any coating work.**

### 3.0 SURFACE PRETREATMENT:

#### 3.1 Cracks and Concrete Imperfections:

Any concrete cracks and surface areas damaged during cleaning along with any voids, surface imperfections and areas of missing screed are to be chased, prepared, primed with **Matacryl 108 H Primer** and patched using **Duracon Ready Rep** Repair Mortar to provide a continuous plane. Prior to the **Monopur SL** flooring application

A filler can also be created using the **Monopur SL** resin with a higher ratio of premix (unit C).

### 4.0 MONOPUR SL FLOORING SYSTEM APPLICATION:

All components of the system (primer, bodycoat, topcoat) shall be mixed as per the Manufacturer's instructions before use. See Monopur SL Application Instructions.

#### 4.1 Primer: Concrete (please contact your Equus representative for the correct primer application or requirement)

##### **Option 1:**

All surfaces to be primed shall receive one (1) coat of **Chevaline Epistixx** primer, mixed and diluted for easy application by brush, roller or soft broom at a spreading rate of 8-10 sqm/litre. Allow to dry overnight.

##### **Option 2:**

Apply one (1) coat of **Monopur SL**, combined with thinners to form a primer, by a roller at a spreading rate of 0.350 – 0.500 kg/m<sup>2</sup>. The primer coat must achieve a continuous dry film on the surface. The primer coat is to be broadcast with 0.4 - 0.8mm aggregate at a rate of 0.150 kg/m<sup>2</sup> while wet. Allow to cure 8 hours.

#### 4.2 Expansion Joints:

All expansion and crack propagation joints formed in the floor base must be carried through the **Monopur SL** flooring system and it is advisable when forming expansion joints around columns and equipment set in the floor, to include radial corners to avoid stress-creating angles. A minimum 5 cm radius is advised.

Where required, all expansion joints shall be prepared and primed with **Matacryl 108 H Primer** and must be filled with an oversized backing rod correctly placed and sealed with **Matacryl LM** (always respecting the 2:1 width-to-depth ratio).

##### **Alternative Option:**

The range of **Dymonic Sealants** can also be used for filling expansion joints.

#### 4.3 Anchor Grooves:

Anchor grooves are needed wherever there is a free edge of **Monopur SL** flooring system. This helps to distribute mechanical and thermal stresses around the perimeter, along channels or expansion joints, at doorways and around machinery plinths and columns, arising from

possible shrinkage and temperature changes within the building. This is also applicable as a result of shrinkage of the material during the curing of the system.

Where required a chase shall be formed in the concrete to a depth and width twice the thickness of the system, using a diamond cutting wheel (10mmx 10mm for 4mm thick system).

#### 4.4 Sumps and Drainage details:

The junction between the **Monopur SL** flooring system and the sump/drainage element, shall be chased, primed with **Matacryl 107 CM Primer** and sealed with **Matacry LM** after the **Monopur SL** flooring system has cured. All sumps and drainage details shall be done as per the specific detail drawings.

#### 4.5 Coving:

Coves can be formed with the **Monopur SL** coving material. However, large radius coves are best formed with fine concrete on the new floor before application of the coving mortar

All angles and transitions will be coated with a coving system made up of the **Monopur SL** resin and an appropriate filler/s. Coverage for 10 kg unit is approximately 2.4 lineal metres per unit at a radius of 20 mm and 100 mm height or approximately 1 m<sup>2</sup> at a thickness of 5 mm per unit.

Note: Approved Equus epoxy cover mix can also be used in selected areas. Please contact your Equus representative for the correct cover mix for your application.

#### 4.6 Wear Layer: Monopur SL

Immediately after mixing, apply the **Monopur SL** by pin rake to the required thickness and finish with a steel trowel. Immediately after application spike roll the surface to assist with levelling the material and to release any entrapped air. Within 10 minutes (at 20°C) fully broadcast the surface to refusal (3-4kg/m<sup>2</sup>) with the non-slip aggregate.

Spreading Rates:

For 4mm application = 5.4kg/m<sup>2</sup>

For 6mm application = 7.2kg/m<sup>2</sup>

For 9mm application = 13.3kg/m<sup>2</sup>

Note: Late spike rolling of the material can result in surface defects.

Note: Prior to application of **Monopur Topcoat Sealer** coating sweep and vacuum excess and loose aggregates.

#### 4.7 Topcoat: Monopur Topcoat Sealer

Immediately after mixing, apply the **Monopur Topcoat Sealer** (for best results add 6% of thinners to topcoat) by squeegee and/or roller at a spreading rate of 0.75kg/m<sup>2</sup>. Allow to cure for a minimum of 8 hours at 20°C.

Note: **Monopur Topcoat Sealer** must be applied within 24 hours (at 20°C) of the **Monopur SL** Wear Layer.

#### 4.8 Procedures:

Ensure that at all times all work is carried out in accordance with procedures published by **Equus Industries Ltd** for the **Monopur SL Flooring System**.

#### 4.9 Quality Assurance (QA)

The Equus Certified Applicator is responsible for onsite **QA**. The Equus project checklists outlining the required processes shall be completed and signed as each stage of installation is completed. Photographs of each stage shall be taken and submitted as part of the overall **QA**. A Warranty will not be issued unless a copy of the documentation has been filed with

Equus Industries Ltd. Third party QA documentation is acceptable provided it is equivalent to the Equus issued QA.

## 5.0 PENETRATIONS:

If any penetrations are made through the finished **Monopur SL** flooring system, all holes for fixings or anchors shall be filled with a **Dymonic** (PU sealant) prior to the installation of the penetration. Half screw the fixings and leave the sealant to cure for at least 6 hours. Finish the screwing process after this so that the sealant will act as a gasket to prevent water ingress around the fixing.

## 6.0 MAINTENANCE AND WARRANTY:

### 6.1 Maintenance:

Should the system be damaged at any time by undue mechanical force or excessive building movement and/or wear, the surface shall be repaired using compatible materials applied in accordance with a repair methodology issued by Equus Industries Ltd.

It is important to note that at all times the surface should be inspected, cleaned and maintained strictly in accordance with the provisions of the Maintenance Statement included as part of the warranty given for the project.

To maintain the life and integrity of the **Monopur SL** flooring system, it is recommended that an inspection be carried out approximately (1) one year into the life of the floor to determine its condition and allow for recommendations to be made regarding any re-coat work required, so as to maintain the integrity of the system beyond its warranted life. Reinstatement of the topcoat(s) may also be required within the timeframe of the warranty but is dependent on the surface traffic and operating conditions of the facility.

### 6.2 Warranty:

The **Monopur SL** flooring system may be warranted for a period of up to five (5) years from the date the application is completed.

Such warranty is issued by the Approved Equus Applicator carrying out the work, and is backed by the manufacturer as to the suitability for use of the materials supplied, provided that:

- .1 All specified work is carried out by a Certified Equus Applicator.
- .2 All work is carried out in accordance with this specification or any written amendments thereto issued by the manufacturer.
- .3 An annual inspection of the **Monopur SL** is carried out and any damaged areas are repaired.
- .4 Special conditions are applied where service conditions involve severe mechanical abrasion / impact or chemical spillage or both.
- .5 The warranty does not cover cracking to the system caused by substrate movement.

The area is subject to usage conditions described to Equus Industries Ltd. and the Approved Applicator at the time the work is done, and those conditions remain for the term of the Warranty.

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