

## **EVERPLAY "IN SITU" - Specification**

### **DESCRIPTION**

**EVERPLAY** "in situ" is a poured in place recreation and play surface consisting of recycled rubber crumb bound together with a polyurethane binder. The thickness of the **EVERPLAY** "in situ" can range from 15mm (0.6") to 120mm (4.75") depending upon the application. The unique installation techniques that have been developed by **EVERPLAY** over the past 20 years allow for variation in resilience as required by the current standards. **EVERPLAY** "in situ" has been tested according to ASTM F-1292 for both Head Injury Criteria (HIC) and Gmax. **EVERPLAY** "in situ" contains polyurethane binders throughout the entire thickness of the system.

Since children in the 18 months to 5 year range are just beginning to understand their bodies and would not understand the ramifications of an impact with the surface, the **EVERPLAY** "in situ" for structures and swings for this age group shall have a Gmax <100 and HIC <570.

For the purpose of architectural specifications the **EVERPLAY** installed must meet the performance criteria of less than 100 Gmax and 700 HIC for structures intended for 5 to 12 year olds and less than 100 Gmax and 570 HIC for structures intended for children 18 months to 5 years old, when tested according to ASTM F1292-17 or ASTM F3313-18. Test results performed on the installed **EVERPLAY** using a Triax2000, Triax2010 or Triax2015 instrument (conforming to the technical requirements of ASTM F1292-17) between 10 and 25 days of the installation will be required and **must confirm the Gmax of less than 100 and HIC less than 700 for structures intended for children 5 to 12 years and Gmax less than 100 and HIC less than 570 for structures intended for children 18months to 5 years and with the drop height from the tops of barriers, guardrails, swings and climbers. This is significantly better performance than the maximum values set by CSA Z164020 (G ≤200 and/or HIC≤1000).**

For purposes of accessibility, the surface must comply with all of the performance requirements for slope, gaps, etc. of the **CSA Z614-07, Annex H.**

### **TYPICAL USE**

The **EVERPLAY** "in situ" is used as an outdoor play and recreation surface that is durable, resilient and water permeable. For indoor applications the **EVERPLAY** is usually covered with a carpet, reinforced vinyl, artificial turf or sealed floor.

### **COLOURS**

The standard colour is Terra Cotta.

Upgrade pigmented colour is Green.

EPDM red (32). Black (01) standard

|               |         |  |
|---------------|---------|--|
| EPDM Upgrades | level 1 | Bright Green (31), Light Green (33), Brown (35), Light Grey (36), Blue (38), Light Beige (40)      |
|               | level 2 | Dark Green (39), Gold (48), Tan (59), Blue Gray (61), Eggshell (62), Charcoal (65), Dark Blue (47) |
|               | level 3 | Light Blue (49), Capri Blue (49), Pearl (43), Teal (44)  |
|               | level 4 | Signal Green (64)  |

The polyurethane binder can affect the final colour by darkening or yellowing, which mostly dissipates over time.

### **SURFACE PREPARATION**

The **EVERPLAY** "in situ" can be installed on compacted angular granular ( $\frac{3}{4}$ " crushed stone with fines), asphalt or concrete bases. The base can be undulated or sloped up to 30 degrees within the installation area where these changes in grade are to be reflected through to the final **EVERPLAY** surface. For a compacted granular base, a geotextile is laid prior to the installation of the **EVERPLAY** "in situ".

## CONSTRAINTS

**EVERPLAY** "in situ" is normally installed in a temperature above 5 degrees C. However between 5 and -5 degrees C, a winter grade polyurethane must be utilized for the cushion and mid-layer, but the top EPDM wear layer can be delayed until the temperature of above 0 degrees C and rising. The installation can take place during a light rain.

## Submittals

Certificate from the polyurethane supplier that the binders to be utilized are UV stable and will not detrimentally affect the elongation or functional longevity of the surface as an impact attenuating surface utilized in a playground.

Certificates of testing to ASTM F3351, Standard Test Method for Playground Surface Impact Testing in Laboratory at Specified height for 4.25M (14ft), 4.9M (16ft), and 5.5M (18ft) drop heights with a 'g' value <105 and HIC <710.

Maintenance procedures for the installed PIP surface

Qualifications for at least two of the installation crew for 10 years or more.

Colour samples for EPDM selection where this is the choice of the owner/operator

Other requirements as required by local regulation and contract general conditions, including, but not limited to insurance, WSIB, etc.

## INSTALLATION PROCEDURE

### 1.0 Base Preparation

- 1.1 Granular Base
  - 1.1.1 Granular base will consist of a split compactible granular (¾" crushed stone with fines) material. The granular base will be a minimum of 80mm (3") deep and compacted to 95% Proctor density. Local site conditions will dictate if additional granular is required. HPB is not an acceptable aggregate.  
Note: granular base should be installed in maximum 150mm (6") lifts, watered and compacted. Inspection by a representative of the owner during compaction would be beneficial.
  - 1.1.2 The granular base can be sloped up to 30 degrees or hills may be incorporated into the installation. Other than obvious undulations, the granular base must be smooth in the direction of the grade.
  - 1.1.3 In a playground where the **EVERPLAY** thickness varies as a result of the height of playground equipment the base can be graded smooth or dug down to accommodated the change in thickness within the base, leaving a smooth final surface. If the base is dug down, the contractor must ensure that there will be no ponding of water at the low point in the base.
  - 1.1.4 A geotextile such as Terrafix 200R will be required over the compacted granular base.
- 1.2 Concrete or Asphalt Base
  - 1.2.1 The concrete or asphalt must be smooth and of sufficient slope to allow water to drain from the installation.

### 2.0 Thickness of **EVERPLAY**

- 2.1 The thickness of the **EVERPLAY** "in situ" will be determined by the application. Where the **EVERPLAY** "in situ" is to be installed for a playground surface the thickness should be specified according to the CSA, ASTM and CPSC standards for playground surfacing. In any event the surface must be installed to a thickness that will provide a Gmax of less than 125 and HIC of less than 700 when the actual installation is tested with a Triax2000 instrument between 10 and 25 days after the installation. These tests must be performed and certification provided prior to the acceptance of the **EVERPLAY** installation. For all play structures the drop height will be the top of all railings, guardrails and barriers. For climbers the drop height will be the top of the climber. For swings the drop height will be the top of the suspending bar. For rocking or spring elements the drop height shall be a minimum of 2 meters.

### 3.0 Installation

- 3.1 **EVERPLAY** "in situ" is only installed by qualified and authorized **EVERPLAY** installers with a minimum of three years installation experience
- 3.2 The rubber crumb and polyurethane binder is generally mixed on site, however some projects will be more efficient and cost effective with the mixing being off site and utilized within the working time of the mixture.

- 3.3 **EVERPLAY** "in situ" contains polyurethane binders throughout its entire thickness.

#### 4.0 Cutting

- 4.1 Since **EVERPLAY** "in situ" is a poured in place system, there will be no requirement for cutting.

#### 5.0 Bevels/Transitions

- 5.1 Bevels/transitions will be required on installations where there is no fixed edge material and the base is either concrete or asphalt.
- 5.2 The **EVERPLAY** bevel/transition is installed at the perimeter of the **EVERPLAY** installation running from the thickness of the surface down to the thickness of the rubber crumb. The outside line of the bevel/transition must be clean and follow the designed edge of the installation.

#### 6.0 Edging

- 6.1 Where the **EVERPLAY** is installed on a granular base, the perimeter of the installation should have either a curb or trenched termination.
- 6.2 Where the outside edge is concrete curb and on an accessible route a notch shall be provided to provide long-term support for the **EVERPLAY** surface.
- 6.3 When installed on a hard base, it is the recommendation of **EVERPLAY** that all **EVERPLAY** installations have either a curb or **EVERPLAY** Bevel at all edges of the installation.

#### WARRANTY – 5 year

Each **EVERPLAY** authorized installer warrants that the **EVERPLAY** "in situ" installed conforms to the formulations and standards of **EVERPLAY INTERNATIONAL INC.** This warranty is in lieu of any other warranties expressed or implied, including, but not limited to any implied warranty of merchantability or fitness for a particular use. To maintain the warranty in effect, the **EVERPLAY** maintenance procedures (provided in the original submittals) must be adhered to. Note that fading and wear of the pigment or painted surface are considered normal wear and tear. Not included is vandalism or other willful acts.

The sole and exclusive remedy of the buyer against the **EVERPLAY** authorized installer shall be for the replacement of the defective area for a period of five years from the time of installation. No other remedy, including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental, or consequential loss, shall be available to the buyer or owner.

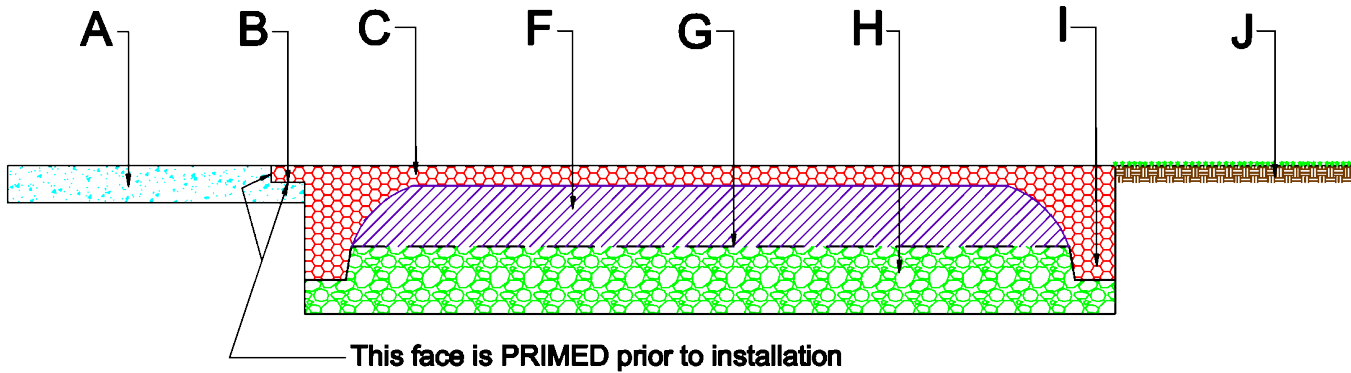
rmz Elastech Products Inc., the manufacturer of polyurethane binders (SF138) utilized in the **EVERPLAY** "in situ" system will be able to provide a certificate (provided in the original submittals) stating that the SF138 polyurethanes utilized in the **EVERPLAY** project are the same as those formulated and manufactured for use in the **EVERPLAY** "in situ" system since 1990. The binders utilized in the **EVERPLAY** "in situ" contain no latex. Utilization of the SF138 will allow for the maintained **EVERPLAY** surface to remain resilient and perform within the requirements of the ASTM F1292-17, ASTM F3313-18 or CSA Z614 for the warranty period when field tested with a Triax2000, Triax2010 or Triax2015 instrument from the same drop heights and at the same locations tested at the time of the initial **EVERPLAY** installation. The results of the drop tests at the time of installation must provide a Gmax of less than 100 and HIC less than 700 for structures intended for children 5 to 12 years and Gmax less than 100 and HIC less than 570 for structures intended for children 18months to 5 years for the noted drop heights when field tested with a Triax2000, Triax2010 or Triax2015 instrument. The performance of the maintained surface will be such as not to exceed a Gmax of 125 or HIC of 800 from the original drop heights during the warranty period. For this warranty to be in effect, a plan outlining the locations, drop height and results must be forwarded to **EVERPLAY** International Inc. within 60 days of the initial **EVERPLAY** installation.

The **EVERPLAY** surface will continue to meet the requirements **CSA Z614-07, Annex H** with regard to gaps, slopes and changes in vertical height provided the problem is not related to a failure of the sub-base.

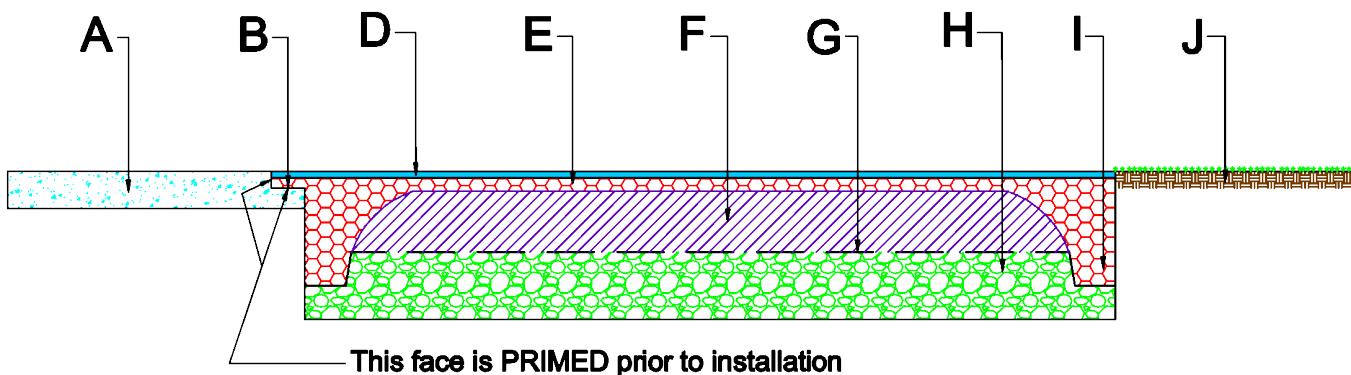
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## EVERPLAY SURFACE CROSS SECTION



## EVERPLAY SURFACE CROSS SECTION / EPDM



A - Asphalt, concrete or timber curb - face primed prior to installation of EVERPLAY.

B - 50mm x 25mm notch in concrete curb.

C - EVERPLAY 30mm top layer (this is constant).

D - EVERPLAY 10mm top layer EPDM (this is constant).

E - EVERPLAY 20mm second layer (this is constant).

F - EVERPLAY double density cushion layer - varies in depth according to fall height.

G - Terrafix 200R Filter Cloth.

H - 19mm (3/4") Granular A (crusher run) base - depth varies.

I - Trenched edge, approximately 80mm x 80mm (3" x 3").

J - Sod, possibly installed after surface.