

PART 1 General

This specification covers the performance requirements, submittals, materials, base preparation, layering, installation and guarantee of poured-in-place safety surfacing.

Performance Requirements

1.1 The Safety Surface System shall have been manufactured by name within Canada for minimum of (5) years.

1.2 The installation of the Safety Surfacing specified herein and indicated on the Drawings shall be performed by firm who can furnish supporting evidence of installation experience to perform this work and who has regularly been engaged in this work on a full time basis for a period of not less than 5 years.

1.3 The following specifications, standards and codes shall hereby form a part of this specification.

1.3.1 American Standard for Testing and Materials (ASTM-F1292)

1.3.2 Canadian Standards Association (CSA-Z614-14)

1.3.3 Consumer Products Safety Commission (CPSC)

1.3.4 National Bureau of Standards

1.4 Material shall be vandal resistant, firmly secured so that it cannot be pulled away from the playground surface.

1.5 Material is used in construction of the Safety Surface System shall be tested for conformance with requirements of ASTM F1292.

1.6 Manufacturer must be capable of material supply and completed installation within a (14) day performance window of each individual project.

1.7 Manufacturer must supply preventative maintenance program recommendations along with clear and definitive cleaning instructions of the product supplied.

1.8 Manufacturer must be capable of providing performance bond if required.

1.9 Installed surfaces shall achieve a HIC value of less than 700 and Gmax values of less than 125.

Submittals

2.1 If a substitute is proposed as an "equal" to an item named in this Section, comply with Division I Subsection 6.01 and submit sufficient evidence to prove objectivity that the item conforms to this Section and is equal to the named entity that with the exception of the Binder used to bond the surface.

2.2 General: Submit the following in accordance with Conditions of Contract.

2.3 Certified Test Data that Safety Surfacing meets or exceeds the following:

2.3.1 Current ASTM-F1292 Guidelines.

2.3.2 Current CSA-Z614-14 Guidelines.

2.4 Samples

2.4.1 Submit Samples of the following for approval by the Engineer.

2.4.2 6" inch x 6" inch beveled samples of the 2-1/2" safety surface.

2.5 Manufacturer's Review: Submit written statement, signed by safety surfacing installer stating that Drawings and Specifications have been reviewed by qualified representatives of materials manufacturer, and that they are in agreement that materials and system to be used for safety surfacing are proper and adequate for applications shown.

2.6 Substrate Acceptability: Submit a certified statement attesting that areas and surfaced designated to receive safety surfacing have been inspected and found satisfactory for reception of work covered under this Section: and are not in conflict with "Warranty" requirements. Application of materials will be constructed as acceptance of surfaces.

Material Testing

3.1 Shock Absorbency: When tested in accordance with ASTM F1292, Test Method F355, Procedure C (Metal Head form), the surface shall not impart to the head form upon impact, a peak deceleration exceeding 200 times the acceleration due to Gravity (200 G's). Drop heights used in this test shall be the heights relevant to the proposed play structures used in conjunction with the safety surfacing areas indicated on the Drawings.

3.2 Weathering: After being subjected to a freeze-thaw cycle in accordance with ASTM C 67 and after being subject 200 Degrees F for seven days in accordance with ASTM D 573, the sample shall be retested in compliance with ASTM F1292 at 72 Degrees F only. A peak deceleration rereading not exceeding 200 G's shall be maintained.

Base Preparation

3.3 In order to ensure the consistent performance of the safety surfacing, bases must be constructed to ensure a firm, stable and draining foundation for the surface. Any and all contaminated materials or materials that are subject to decomposition or expansion shall be removed and disposed of.

3.4 Ensure drainage of the base material is existing or install drainage system under the safety surfacing system.



3.5 Construct bases as per Premier Custom Surfacing Inc. specifications for various site conditions as listed below. Premier Custom Surfacing Inc. Cannot guarantee a safety surface over bases that do not meet the base requirements.

3.5.1 Asphalt, concrete or compacted stone bases. Stone bases shall be minimum 3" depth wet compacted to a 95% proctor density.

In Addition to ASTM F1292

4.1 Slip Resistance: Wet dynamic reading shall not be less than 40 when tested in accordance with ASTM E 303, using British Portable Skid Resistance Tester.

4.2 Flammability: Minimum Critical radiant flux of 0.22 Watts/CM² when tested in accordance with ASTM E 648.

4.3 Particulate Rubber Particles must successfully pass CFR 1630 for flammability of carpet and rugs.

Warranty

5.1 Provide a written warranty stating that work executed under this Section will be free from defects of materials and workmanship for a period of five (5) years from date of Substantial Completion, and that material breakdown and unraveling will be remedied on written notice at no additional cost to the Owner. The Warranty shall be in writing and shall be signed by the Contractor. Warranty shall include removal and replacement of materials as required to repair safety surfacing, at no cost to the Owner.

Site Conditions

6.1 Conditions of substrates with respect to structural performance shall be evaluated and approved by the applicator prior to applying the safety surfacing.

6.2 Safety Surfacing shall not be placed when the ambient temperature is below 40 Degrees Fahrenheit, when there is frost in the base, when rain or frost is forecasted, or any other time when weather conditions are unsuitable for the type of material being placed.

6.3 At the time of application ambient air temperature shall be 40 Degrees Fahrenheit or greater and remain so for at least 7 days after installation is complete.

Delivery, Storage, and Handling

7.1 All materials for the work of this Section shall be delivered, stored and handled so as to preclude damage of any sort. Materials showing evidence of damage shall not be used and shall be removed from the site.

7.2 Materials in manufacturer's unopened containers or bundles must be fully identified with brand, type, grade, date of manufacture, class, lot number, and other qualifying information.

7.3 Store materials in original tightly sealed containers or unopened packages. Materials shall be stores out of weather, off the ground, in dry area, in compliance with manufacturer's maximum storage temperature range.

7.4 Materials must be delivered and off-loaded by installation personnel.

Job Conditions

8.1 Maintain manufacturer's current installation instructions at the job site at all times for safety surface material to be used on the Project.

8.2 Maintain material storage area at minimum 60 degrees Fahrenheit, but not above 90 degrees Fahrenheit for 48 hours prior to application.

8.3 Proceed with work of this section only after substrate construction and penetrating work have been compacted to 98% of dry density.

8.4 Do not proceed with work during inclement weather. Comply with manufacturer's recommendations for application and curing under specific climatic conditions.

8.5 Coordinate application of safety surfacing with work of other trades.

Protection

9.1 Protect the safety surface from damage, resulting from spillage, dripping, and dropping of mater. Prevent Materials from entering and clogging drains. Repair, restore or replace work, which is soiled or damaged in connection with the performance of the work.

MATERIALS

General

10.1 All material components of the safety surfacing shall be obtained from the same source, Binder type by name must be verified by customer prior to field installation. No substitutions.

Materials

11.1 Primer: Single component moisture cured polyurethane primer.

11.2 Binder: An elastic polyurethane pre-polymer with minimal odor, excellent weathering and binding characteristics

11.2.1 100 percent MDI based binder.

11.3 Thinner: A thinner, approved by the safety surface manufacturer shall be used for cleaning tools.

11.4 Safety Surface System:

11.5.1 Shall have been tested for shock attenuation under ASTM F1292.

11.5.2 Shall have been tested for non-slip characteristics under ASTM E-303.

11.5.3 Shall have been tested for ease of ignition under BS-5696 and ASTM D-2859.

11.5.4 Shall have been tested for fire resistance under ASTM E648.

11.5.5 Shall contain no latex.

Mixing & Preparation

12.1 Mixture of binder and Rubber will be determined by the system, which is specified. Verify with manufacturer for specific detailing.

General

13.1 Installation of Safety Surfacing shall be over bituminous concrete sub-base as per manufacturer's instructions and as detailed. The safety surfacing in itself shall not create new hazards; hence all installations shall be done as carefully as possible in a neat and workmanlike manner.

13.2 All work must be protected from vandalism and other damage during the installation.

Inspection

14.1 Examine areas and conditions where safety surfacing is to be installed and curing of the safety surfaces.

Installation

15.1 Safety Surface shall be installed to thicknesses indicated on the Drawings. Minimum thicknesses indicated on the Drawings are based on the performance standards of Play Space Services / Rainbow Turf Products.

15.1.1 The use of minimum base executed within Premier Custom Surfacing Inc playground safety surfacing system is solely for the purpose of setting a performance standard. It does not indicate a proprietary item, nor does it preclude products of other manufactures so long as the requirements of these specifications and all other applicable provisions of the contract documents are met.

15.1.2 Thicknesses of safety surfacing must meet all safety requirements and codes for fall heights of specified play equipment.

15.2 Primer shall be applied to the substrate at a rate of 300 square feet per gallon using a short nap roller.

15.2.1 Installation to be a one part pour-in-place surface.

15.2.2 Using trowel and Roller, the buffing mix shall be spread in a consistent density to specified thickness. Compact and allow to dry for a minimum of 24 hours (necessary time varies based on temperature and humidity).

Cleaning & Protection

16.1 Clean, repair or replace work of trades soiled or damaged by safety surface installation work.

16.2 The General Contractor shall be responsible for protection of finished surfaces until completion of construction and sign off.