

ProBound

COLORED RUBBER MULCH POURED-IN-PLACE PLAYGROUND SPECIFICATIONS

PART 1 – GENERAL

1.01 Work included

This work includes furnishing and installing the ProBound surface. The surfacing manufacturer shall be responsible for all labor, materials, tools and equipment needed to perform all work and services for the installation of the surface.

NOTE: Site materials and methods, drainage, playground equipment and layout, fencing, substrate preparation and similar work is provided by others and is described in other sections. Consult surfacing manufacturer for specific substrate preparation requirements. Edit, retain or delete paragraph below to suit project requirements and Specifier practice.

Related Sections: Division 2 Sitework Sections: Materials and Methods, Excavation, Asphalt Paving, Concrete Paving, Sub-Drainage, Storm Drainage, Fencing, Playground Equipment and Structures.

1.02 DESCRIPTION OF SYSTEM

ProBound shall be poured in place and trowelled/rolled to provide for a resilient, seamless, porous rubber surface installed over the specified base. The surface shall provide for a single layer system consisting of polyurethane resin mixed with post consumer recycled shredded rubber material derived from recycled tires. It shall be designed, manufactured and installed to meet the performance and quality assurance criteria outlined below.

1.03 PERFORMANCE REQUIREMENTS AND QUALITY ASSURANCE

American Society for Testing and Materials (ASTM) ASTM F1292-04 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment: Prior to bid the impact attenuation test results will be provided to the owner or owner's representative. These test results shall be certified and submitted on the letterhead of an independent testing laboratory; laboratory must be certified to meet calibration program requirements and required critical fall heights of playgrounds. Impact attenuation test results shall meet or exceed Consumer Product Safety Commission Guidelines and requirements set forth in ASTM F1292 for impact attenuation (G-max yield less than 200 and Head Injury Criteria "H.I.C." yield less than 1000). ASTM F1951-99 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment: All playground surfacing products must be in compliance with the Uniform Federal Accessibility Standards (UFAS) FEDSTD-795, the Architectural and Engineer Instructions (9AEI) Design Criteria and the requirements of the Americans with Disabilities Act Accessibility Guidelines (9ADAAG) to ensure wheelchair access under and around playground.

Surfacing Contractor Pre-Qualifications

A list of twenty-five (25) surfacing projects completed with a similar product within the last ten (10) years. List shall include names of project representatives and respective telephone numbers.

Insurance Requirements: All bidders must carry minimum insurance of \$1,000,000 General Liability and \$2,000,000 in Excess Liability. The issuing underwriter shall be an "A" rated company.

Submittals

NOTE: Before, during or after construction the surfacing manufacturer will furnish the below information which includes submittal of relevant data. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section. Any alternate product must be submitted with prior approval packages a minimum of ten (10) days prior to bid date. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section. Product Data: Submit manufacturer's product data and Material Safety Data Sheets (MSDS). Verification Samples: Upon request, submit manufacturer's standard verification sample – two samples measuring 2" X 2" minimum in applicable depth. Manufacturer's details showing depth of surface system, sub-base materials and edge details. Performance Requirements ASTM F1292-04 impact test per applicable critical fall height requirements ASTM F1951-99 wheelchair accessibility test Quality Assurance/Control Submittals Other Test(s) as requested by architect/engineer/owner Reference List including completed projects, which require the same level of difficulty, size of project being specified Sample of Insurance Certificate. Statement signed by the Manufacturer of the synthetic safety surfacing, on letterhead, attesting that all materials under this section shall be installed by the Manufacturer's employees and that playground surfacing installation shall not be performed by anyone other than the Manufacturer. Written Guarantee from Manufacturer against all defects in material and/or workmanship (specified herein). Safety Surface shall be warranted for labor and materials for a period of no less than two (2) years. The Surfacing Manufacturer must submit written warranty.

NOTE: Coordinate article below with Division 1 Product Requirements Section. Delivery, Storage & Handling General: Comply with Division 1 Product Requirement Section. Delivery: Materials and/or equipment shall be delivered and store in accordance with the manufacturer's recommendations. Materials delivered in manufacturer's original, unopened, undamaged containers with identification labels intact.

Storage and Protection: Store materials protected from the elements; avoid exposure to harmful environmental conditions and store materials at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C). Project / Site Conditions Environmental Requirements: Install surfacing system when minimum ambient temperature is 40 degrees F (1 degree C) and rising. Surfacing shall be installed on a clean, dry dust-free subsurface. Do not install in steady or heavy rain. WARRANTY Project Warranty: Refer to Conditions of the Contract for project warranty provisions. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty, which shall include a statement relative to the finished product being free from defects of materials and workmanship for a period of two years from date of completion of work, outside of normal wear and tear, shall be remedied on written notice at no additional cost to the Owner. Warranty Period: Two (2) years from date of completion of surfacing work.

PART 2 – PRODUCTS

NOTE: Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

ProBound SURFACING SYSTEM: Primer 100% Single Component Polyurethane Binding Agent -Methylene Diphenyl Isocyanate (MDI) based binder. All rubber in system will be of a select quality and consistent blend of recycled rubber sizings (shredded styrene butadiene rubber -SBR), free from foreign matter, and 100% single component polyurethane binder to achieve maximum porosity while forming a resilient surface material. Rubber buffing must be organically colored and tested successfully for five (5) year color retention. All rubber shall remain consistent in gradation and size (between 3/8" to 2").

Thickness: The type of playground equipment specified determines the required surfacing thickness, and the total surface thickness may be different at various locations on the playground site depending on the Playground Equipment Manufacturer's Critical Fall Height (CFH) requirements per ASTM F1292 and CPSC guidelines. Specify project's CFH requirements and indicate on working drawings. To determine exact CFH requirements the architect or owner's representative should contact the Playground Equipment Manufacturer.

Color: Owner shall choose Color Blends or owner's representative at least 72 hours before the bid date.

PART 3 – EXECUTION

3.0 Site Preparation (by Others) Owner or Owner's Representative shall provide and arrange for the finished subsurface. Finished Grade: Verify that finished elevations of adjacent areas are as indicated on the drawings, that the appropriate sub-grade elevation has been established for the particular safety surface to be installed, and that the subsurface has been installed in a true, even plane, and sloped to drain as indicated in drawings.

Subsurface Type: Shall be concrete, asphalt or 95% compacted stone base. NOTE: If compacted stone is used as a subsurface, proper treatment with herbicides, by others, must be applied prior to arrival of surface installation crew. Filter cloth and a minimum of 1-1/2" of ProBound surface (total depth) is required over a stone base.

Subsurface Tolerance: Concrete or bituminous subsurface shall be within 1/8 inch (3.0 mm) in 10 feet (3050 mm). Tolerance of aggregate subsurface shall be within 3/8 inch (10mm) in 10 ft (3050 mm). Verify that aggregate subsurface has been fully compacted in 2" lifts to 95 percent or greater.

NOTE: A stone compaction test (to be completed by others), stating the stone is at least 95% compacted, must be submitted to the architect and/or owner for approval and a copy forwarded to the Surfacing Manufacturer prior to installation of ProBound surface. Curing of Asphalt and Concrete: If safety surfacing is to be installed over concrete subsurface, concrete base shall be allowed to cure at least seven (7) days prior to commencement of surfacing. Asphalt base shall be allowed to cure a minimum of fourteen (14) days and should be pressure washed prior to commencement of surfacing installation.

Drainage: Subsurface must exhibit positive drainage. Verify that sub-surfacing drainage, if required, has been installed to provide positive drainage. Cleaning: The entire subsurface shall be clean, dry and free from any foreign and loose material.

3.01 PREPARATION

Scheduling: ProBound shall be installed after the playground equipment is installed and after the subsurface is ready to receive ProBound. Do not proceed with playground surfacing installation until all applicable site work, including subsurface preparation, fencing, playground equipment installation and other relevant work, has been completed. Surface Preparation: Using a brush or short nap roller, apply primer to the subsurface perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft²/gal (7.5 m²/L).

3.02 Installation

Components of the safety surface system shall be mixed on site in a rotating tumbler to ensure components are thoroughly mixed and are in accordance with manufactures recommendations. Primer Application: Using a brush or short nap roller, apply primer to the subsurface (if concrete or asphalt) perimeter and any adjacent vertical barriers such curbs or sidewalk slabs that will contact the surfacing system. Apply primer to subsurface in small quantities so that impact course can be applied before adhesive dries.

ProBound Installation: The buffing mix shall be spread, by means of trowel or roller, in a consistent density to specified thickness. Thickness throughout the playground equipment use zone shall be as required to meet the impact attenuation requirements specified herein. Allow surface to cure for a minimum of 48-72 hours. At the end of the minimum curing period, verify that the surface is sufficiently dry and firm to allow foot traffic and use without damage to the surface. Do not allow foot traffic or use of the surface until it is sufficiently cured.

Edges: Surface edges shall be flush with edge of adjacent area or tapered to provide safe transition. Surface shall be sloped to drain as indicated on plans. Large Areas -All areas in excess of 2,000 sq. ft. or that require adjacent color pours will have a cold joint or seam due to the nature of the installation process. Although seldom visible, large areas or adjacent colors require the Probound material to be installed on separate days. Note: Specify provisions for protecting work after installation but prior to acceptance by the owner. Coordinate article below with Division 1 Execution Requirements Section.

3.03 Protection

Surface installation crew shall be responsible for the protection of ProBound surface only during the installation process. Owner and/or Owner's Representative shall be responsible for the protection/security of the ProBound surface, against pedestrian foot traffic, vandalism, and other construction trades, during the crew's off hours and 48-72 hour curing period upon completion of the installation. Any damage to the ProBound surface shall be repaired at the Owner's and/or Owner Representative's expense.

FOR SPECIFIC PROJECT SPECIFICATIONS, OTHER PROBOUND APPLICATIONS, OR FOR FURTHER INFORMATION, PLEASE CONTACT:

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