POURED-IN-PLACE RESILIENT SURFACING

SAFETY TURF INC

RECYCLED

HANDICAP ACCESSIBLE

Making Playgrounds Safe Since 1989

SAFETY TURF, INC.
POURED-IN-PLACE RESILIENT SURFACING

Falls are the leading cause of playground injuries. Therefore, choosing a playground surface is your most important consideration. Selecting **Safety Turf, Inc.,** with over **30 years of experience in the manufacture and installation of playground safety surfacing,** will reduce the number and severity of injuries caused by falls to the surface.

Our proven poured-in-place system consists of two layers. The first layer, or **cushion course,** is a blend of **recycled SBR and Butyl rubber** mixed with a solvent free **MDI polyurethane binder.** This course can be adjusted in thickness to meet fall height criteria. The second layer, **or wear course,** consists of high quality **EPDM and/or TPV granules** mixed with the highest quality **MDI polyurethane prepolymer binder.** This layer, with its many color choices, provides a long lasting, attractive surface.

BENEFITS & FEATURES

- **LOW MAINTENANCE**
  Requires no raking, debris can be swept or blown off
- **SLIP RESISTANT**
  Non-skid wet or dry
- **HANDICAP ACCESSIBLE**
  Conforms with the Americans with Disabilities Act and ASTM F 1951-21
- **SEAMLESS**
  No unsightly seams or tripping hazards (Day seams may be necessary for larger areas)
- **DURABLE**
  Guaranteed for five years
- **POROUS**
  Water drains through the surface
- **CONFORMS WITH CPSC GUIDELINES**
  Exceeds “G” and “HIC” standards
- **RECYCLED**
  The majority of the surface is recycled rubber, benefitting the environment

SAFETY TURF, INC.
POURED-IN-PLACE RESILIENT SURFACING

INTRINSIC & PHYSICAL PROPERTIES 8/15/24

Health & Environment after Curing:	**Non-toxic Non-allergenic Non-polluting**
Weathering & Wearing:	**Very Durable**
Fatigue Resistance:	**Unaffected by repeated blows**
Change of properties by temperatures:	**Product cannot be damaged by extreme cold or hot weather (e.g. 0 to 140º F)**
Static Coefficient of Friction: (ASTM D2047-99)	**Non-skid, wet or dry**
Porosity: (ATSM F1551-09(2017) section 42)	**Rainfall Capacity, 877" / hr (5" sys)**
Tensile Strength & Elongation: (ASTM D412-98a)	**Max. Load, Psi - 167 Elongation % - 180**
Tear Strength: (ASTM D624-00)	**Max. Load, N - 64.1 Strength (N/mm) - 3.41**
Flammability (ASTM D2859-96):	**Passed**

SPECIFICATIONS

1. General

2023-1

1.1. Summary

A Safety Turf is a poured-in-place resilient rubber surface installed over a base as specified. It consists of a polyurethane binder mixed with 100% recycled shredded buffing which makes up the cushion layer. The cushion layer is capped with TPV (Thermal Plastic Vulcanized) or EPDM (Ethylene Propylene Diene Monomer) rubber granules mixed with a polyurethane binder creating the wear course. A wide variety of colors and color mixes are available.

B Safety Turf shall be responsible for all labor, materials, tools, and equipment to perform all work and services for installing the surface.

C Surfaces shall comply with ADA and CPSC guidelines as well as ASTM standards.

1.2. Quality Assurance:

A Impact attenuation test results will be provided to the owner's representative. This will also include HIC test results. Test results shall meet or exceed ASTM-F1292 Impact Attenuation Guidelines peak deacceleration of 200 G-max or less from the actual fall height and the HIC (Head Injury Criteria) test results shall be 1000 or less at this fall height.

B If requested, impact attenuation results can be provided per ASTM-F3313 Impact Attenuation of Playground Surfaces Within the Use Zone of Playground Equipment as Tested in the Field for an additional cost.

C Surface shall meet the requirements of **ASTM- F1951 Determination of Accessibility of Surface Systems under and Around Playground Equipment.**

D Surfacing should be installed per ASTM and CSPC guidelines.

E Installers / Applicators to be trained and approved by manufacturer of the playground surfacing system.

F If sub-base is stone it must be installed by a Safety Turf approved vendor. Contact Safety Turf for an approved vendor list.

1.3. Project / Job Conditions:

A Environmental Requirements: Install surfacing when minimum ambient temperature is 40 degrees F and maximum ambient temperature is 90 degrees F. Do not install in steady or heavy rain.

B Installation in weather conditions where the temperature is less than 50 degrees F and / or high humidity may affect cure time and structural integrity of the surface. Contractor shall consult manufacturer for recommendations on installation during these conditions and adjust types and / or quantities of binding agents to compensate for weather conditions.

C Immediate surrounding sites must be reasonably free of dust conditions as this could affect the final look.

D Barricade area to prohibit foot traffic on the surface for the time specified by the manufacturer.

2. Products

2.1. Manufacturer – Safety Turf, Inc. P.O. Box 908, Royersford PA 19468. 1-800-804-4595

2.2. Materials:

A **Poured Cushion Layer** – A precise combination of recycled tire buffing mixed on site with an MDI based polyurethane binder. Depth of the cushion layer shall be per the performance requirements of ASTM-F1292.

B **Poured ½" Wear Course Layer** – EPDM or TPV rubber granules (1-4mm size) and an MDI based polyurethane binder (Note: An Aliphatic Binder may be used if initial "yellowing" of light-colored EPDM or TPV granules is undesirable). Please consult the surfacing manufacturer for details.

C **Color** – Colors will be chosen by owner or owner's representative.

3. Procedure

3.1. Sub Base

A If the surface is existing (or new) asphalt or concrete, a not larger than a 1" deep by 1" wide keyway is to be cut into the surface along the perimeter of the safety surface area. This will provide for a stopping point for the beveled perimeter edge allowing for a barrier free accessibility.

B If asphalt or concrete is not used, then the sub base will be a compacted stone base. This base shall be prepared with a minimum of 4-6" of PennDOT 2B (3/4" clean) stone that is spread and compacted to a flat surface leaving the thickness of the required safety surface below finish level. Please note that a greater thickness of stone may be required if the existing material being removed is, for example, wood chips.

C 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 true, even plane, and sloped to drain as indicated on the drawings.

3.2. Installation

A **Thickness** - Total minimum depth of the safety surface will be 2". The thickness may be adjusted to meet the fall height requirements noted in section 1.3 section A.

B **Poured Cushion Layer** - The cushion layer of recycled tire buffing will be mixed on site with an MDI based polyurethane binder in a mortar mixer. Mix buffing until they are coated uniformly. This layer will be poured in place by means of a screed and hand trowel at the thickness required to meet the performance requirements as referenced in ASTM-F1292. Edge conditions shall be per project requirements. The minimum temperature requirement for installation of the cushion layer is 40 degrees. Cure time increases at lower temperatures and humidity.

C **Poured Wearing Course Layer** - The 1/2" poured wearing course layer shall be composed of EPDM or TPV granular rubber. The EPDM or TPV rubber granules will be mixed on site with a MDI polyurethane binder in a mortar mixer. Mix granules until they are coated uniformly. The wearing course layer will be poured-in-place and hand trowel or rolled. If the safety matting is installed over existing asphalt or concrete, the EPDM or TPV granules will be troweled into the keyway to provide a smooth transition from the existing surface onto the safety matting. The minimum temperature requirement for installation of the wearing course layer is 50 degrees. Cure time increases at lower temperatures and humidity. Day seams may be required for areas greater than 2,000 square feet.

D **Edges** - Surface edges shall be flush with the edge of adjacent area, or be such that there is a smooth transition onto the safety matting from the existing surface, or per owner's requirements.

E **Porosity** - Surface shall be porous to the extent of allowing the equivalent of 12" per hour of rainfall to flow through it.

F **Traction** - Surface shall be non-skid, wet or dry.

G **Softness** - Surface deflection with a 30 lb. Load shall be ¼" to ½" with 99% recovery.

H **Health & Environment After Curing** - Surface shall be non-toxic, non-allergenic and non-polluting.

3.3. Cleaning

A Upon completion of installation of the safety surfacing, clean all work areas of PIP materials and trash.

3.4. Protection

A The safety surface should be protected from foot traffic for a minimum of 24 hours after installation to allow surface to cure. (Note: This curing time may be longer in colder weather.)

Warning: Like so many surfaces, including asphalt, sand, metal and plastic, all of which can be found in playground environments, rubber surfaces will get hot when exposed to direct sunlight. Safety Turf strongly recommends that children wear shoes when playing or walking on any rubber surface, regardless of the manufacturer or specific type of surface.

INSTALLATION DETAILS

FIG. 1

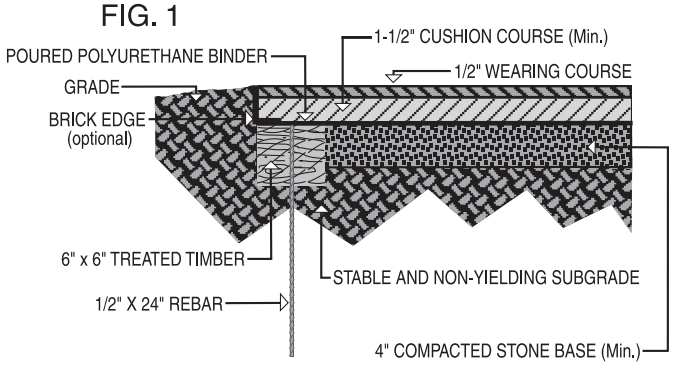


FIG. 2

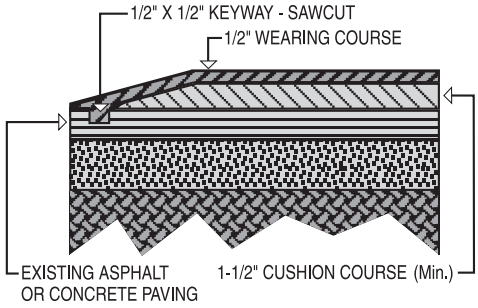


FIG. 3

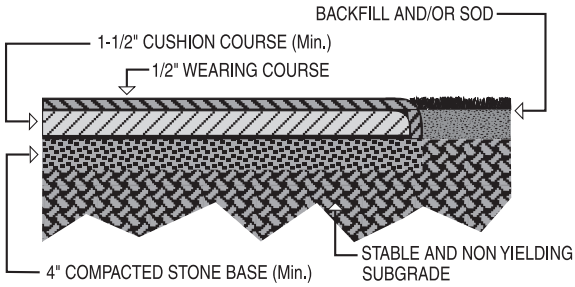


FIG. 4

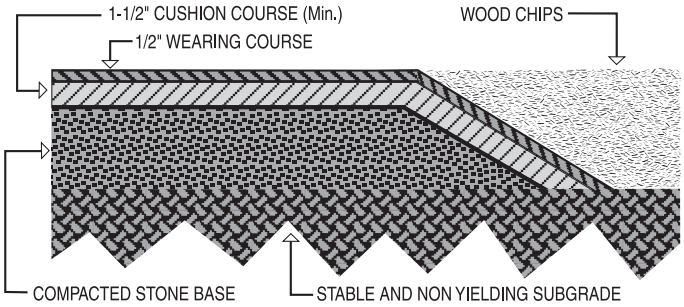


FIG. 5

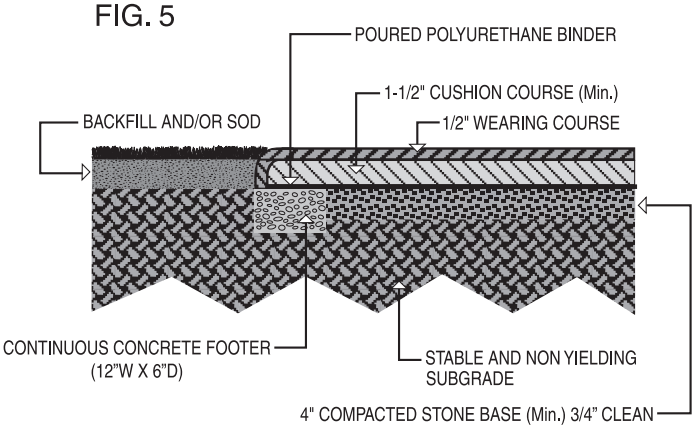
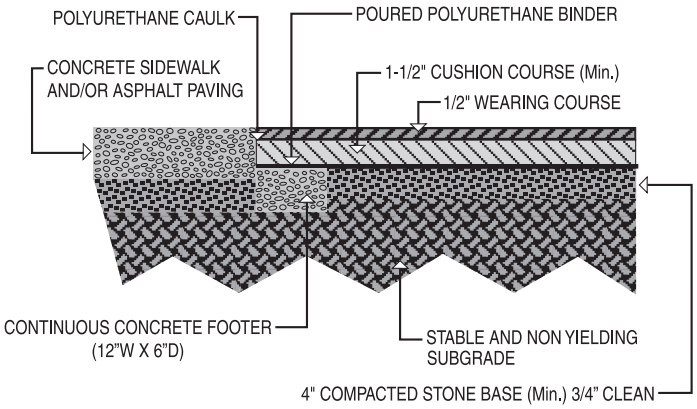
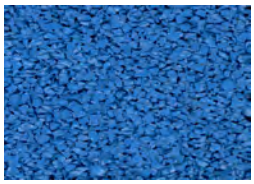


FIG. 6

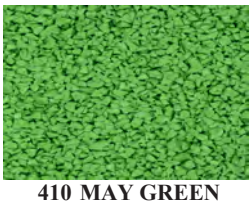


Safety Turf Standard EPDM Color Choices

000 RED


180 SKY BLUE

210 BEIGE

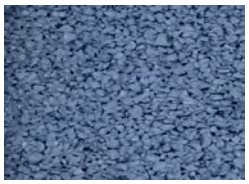

410 MAY GREEN

460 SIGNAL GREEN

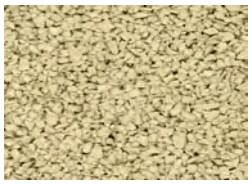
560 RAINBOW GREEN

590 RAINBOW BLUE

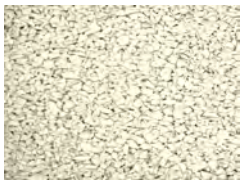
Safety Turf Premium EPDM Color Choices

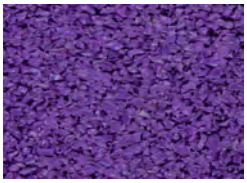

100 BLUE GREY

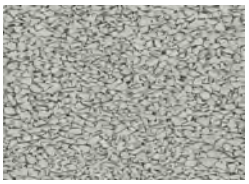
200 BRIGHT YELLOW

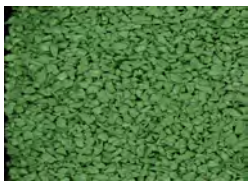

240 EGGSHELL

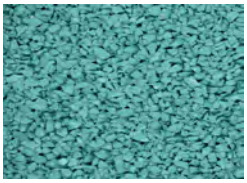
280 BROWN


290 PEARL


340 PURPLE


380 LIGHT GREY


470 RESEDA GREEN

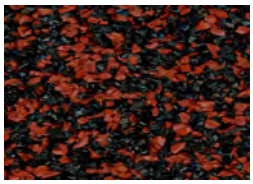

540 TURQUOISE BLUE

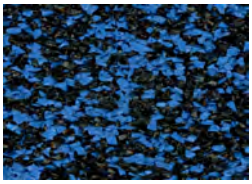
550 ORANGE

570 EARTH YELLOW

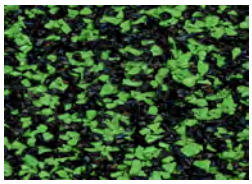
580 TEAL

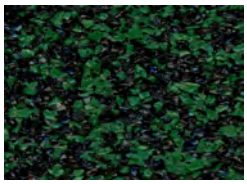
Safety Turf Standard EPDM 50% Color 50% Black Choices

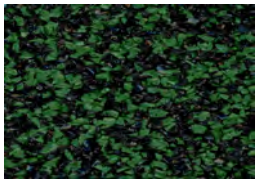

000 RED/BLACK

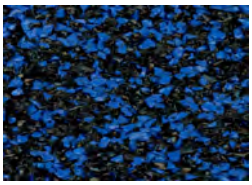

180 SKY BLUE/BLACK

210 BEIGE/BLACK


410 MAY GREEN/BLACK


460 SIGNAL GREEN/BLACK

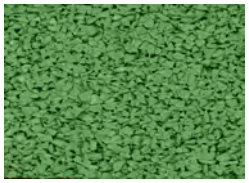

560 RAINBOW GREEN/BLACK

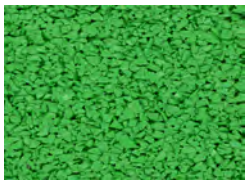

590 RAINBOW BLUE/BLACK

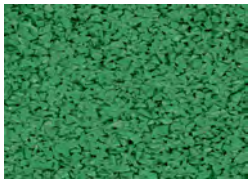
- All colors may be mixed with Black (50% Color/50% Black).
- All colors are available mixed in any combination.
- Sample combinations are available upon request.

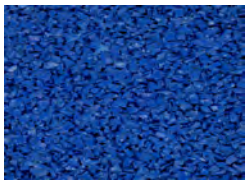
Safety Turf Standard TPV Color Choices

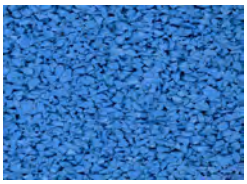
RH01 RED

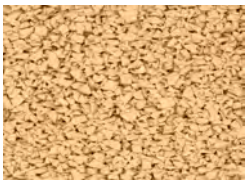

RH10 GREEN

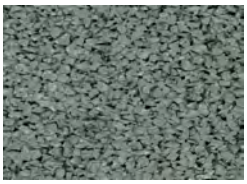

RH11 BRIGHT GREEN


RH12 DARK GREEN


RH20 BLUE

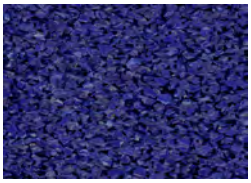

RH22 LIGHT BLUE

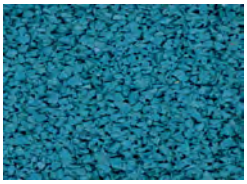

RH30 BEIGE

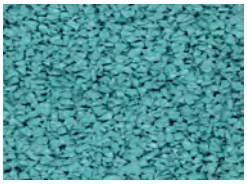

RH61 LIGHT GREY

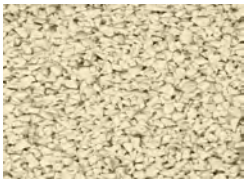
Safety Turf Premium TPV Color Choices

RH02 RED


RH21 PURPLE

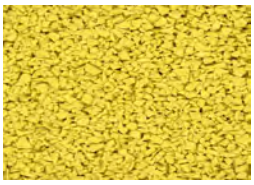

RH23 AZURE


RH26 TURQUOISE

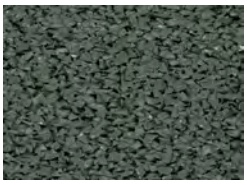

RH31 CREAM

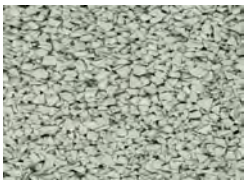
RH32 BROWN

RH40 MUSTARD YELLOW

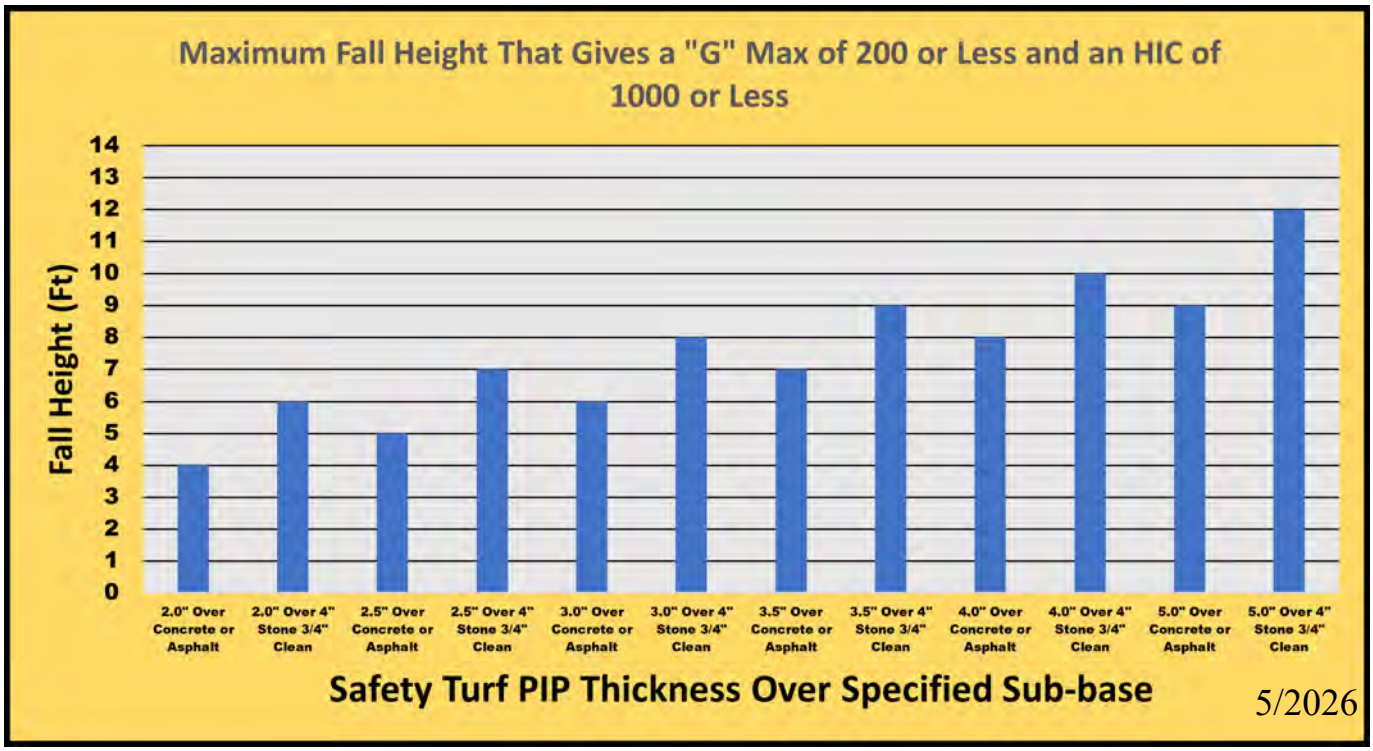

RH41 BRIGHT YELLOW

RH50 ORANGE


RH60 DARK GREY


RH65 PALE GREY

FALL HEIGHT CRITERIA GRAPH



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