



GT Impax Bonded Rubber **Product Specification**

PART 1 - GENERAL

Work Details:

This work includes furnishing and installing GT Impax recycled poured bonded rubber surfacing.

GT Impax recycled poured bonded rubber surfacing shall be poured in place and trowelled to provide for a resilient, seamless rubber surface installed over the specified base. The surfacing provider shall be responsible for all labor, materials, tools, equipment, and applicable taxes to perform all work and services for the installation of the surface. The surface shall be stable and slip resistant to comply with all requirements set forth in the Americans with Disabilities Act.

Quality Assurance & Compliance Details:

Impact Attenuation - ASTM F1292-04: 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 lab. Impact attenuation test results shall meet or exceed Consumer Product Safety Commission Guidelines for impact attenuation (G-max and Head Injury Criteria (HIC).

Accessibility of Surface Systems - ASTM F1951-08: All Playground surfacing products must pass testing to ensure wheelchair access under and around playground equipment as required by the American Disabilities Act.

Coefficient of Friction - ASTM D2047-82: All products must meet a minimum standard on coefficient of friction of .9-wet, 1.0 dry.

Permeability: Product shall meet or exceed a coefficient of permeability of 0.4 gallons per square yard per second.

Flammability of Finished Floor cover - ASTM D2859: Product shall meet requirements of ASTM D2859.

Tensile Strength - ASTM D412-87: This test indicates a product's ability to stretch, and how far it will stretch before it breaks. Test results for wear course must be a minimum tensile strength of 60.



PART 1 - GENERAL (Continued)

PSI and minimum % elongation @ break of 140%.

IPEMA Certification: Manufacturer must provide proof of certification. "In the interest of public playground safety, IPEMA provides an independent laboratory which validates a manufacturer's certification of conformance to ASTM F1292-04. A list of current validated products, their thickness and critical heights may be viewed at www.ipema.org."

Submittal Details:

Submittal packages shall include but not be limited to: (1) product samples, (2) supplier's written warranty, and (3) independent laboratory results.

PART 2 - MATERIAL DATA:

Polyurethane Primer and Binder - 100% Single Component Polyurethane Binding Agent - Methylene Diphenyl Isocyanate (MDI) based binder. No polyoils or extenders will be permitted.

Impact/Wear Course - The impact layer is a precise combination of +4 SBR recycled rubber buffings colored with an organic pigmented colorant and coated with an environmental friendly sealant. Bonded poured rubber shall be free of foreign matter and of sizing to achieve maximum porosity and minimum residue.

Colors - The color of GT Impax recycled bonded poured rubber surfacing will be indicated on plans. Owner or owner's representative will be responsible for selecting standard blends.

Note: All colors shown in manufacturers catalog may not be available nationwide. Please contact your GameTime Sales Representative to determine what colors are available in your territory.

Physical Properties:

Tensile Strength (ASTM D412)	60 PSI, minimum
Elongation at Break (ASTM D412)	140%, minimum
Flammability (ASTM D2859)	Pass
Coefficient of Friction (ASTM D204)	
Wet	0.9, minimum
Dry	1.0, minimum
Water Permeability	0.4 gal. /sq. yd./sec., minimum

PART 3 - SUB-BASE TYPES & DETAILS:

Sub-base Requirements - The base shall have the specific maximum slope (2%) and shall vary no more than 1/8" when measured in any direction with a 10' straight edge.

Stone - The density requirement is 90% to 95% compaction with final condition of stone as level and stable so as not to shift when traveled on or during surface installation process. A compaction test is required and must be submitted to GameTime prior to installation of poured rubber surfacing. Failure to provide proof of compaction test will void 3-year warranty of bonded rubber surfacing should signs of sub-base failure occurs.

Depth: 4 inch minimum thickness.

Slope: Stone elevation shall maintain 1/4" per foot toward low end.

Porosity: Base course shall maintain porosity for direct drainage.

Enclosure: Stone base course must be surrounded by a retaining curb.

Drainage: Subsurface drainage is recommended under and around a stone base. Perforated pipe or similar system is acceptable.

Tolerances: 1/4" in any 10-foot direction and 1/8" in any 3-foot direction.

Stone Selection: It is critical that different size stones are used so that the base shall be uniformly mixed. The material shall be wetted during mixing operations if necessary for proper blending.

Stone Graduation	U.S. Sieve Percent Passing
1"	100
3/4"	90 - 100
No. 4	35 - 60
No. 30	10 - 30
No. 200	2 - 9

Concrete or Asphalt - Concrete should be finished with a medium broom finish. All new concrete slabs must cure for a minimum of seven (7) days prior to installation. Asphalt cure time requires fourteen (14) days. Once the new asphalt has cured, it must be pressure washed prior to the surfacing being installed. The concrete contractor shall be responsible for flooding the pad to insure proper slope and tolerance. Any areas holding enough water to cover a flat nickel shall be patched prior to arrival of poured bonded rubber installation crews.

Depth: 4 inch minimum thickness.

Slope: Concrete or asphalt shall maintain 1/4" per foot.

Tolerance: Concrete must maintain a tolerance of 1/8" in 10 ft. to avoid low areas that will hold water under the poured rubber surfacing.



PART 4 - SITE PREPARATION AND REQUIREMENTS:

Drainage - Having proper drainage at the low end of the concrete slab is of utmost importance. Any brick walls or curbs at the low end of the slab shall have drainage access through weep holes. Concrete curbing weep holes should be level with finish grade of sub-base or a minimum of 1/8" below top of concrete slab, as GT IMPAX recycled poured bonded rubber surfacing is porous and water drains immediately through it. Weep holes shall be 2" high and 3" wide and shall be installed every three (3) feet. If weep holes are smaller than the recommended size, they shall be installed every 18". Floor drains shall be located outside the high impact areas, as the drains may not be covered with GT IMPAX poured bonded rubber surfacing. Recommended locations for drains are against low-end wall or curb.

Security & Waste Disposal - Surface installation crew shall be responsible for the protection of surface during the installation process while on site only. Owner or general contractor shall be responsible for the protection of the surface during the curing period upon completion of the installation and overnight during the installation. Owner or general contractor shall be responsible for having a dumpster on site for all waste and debris. Failure to provide security and a dumpster will result in additional cost.

Utilities & Access - Power and water must be available within 300 feet of installation. Site will require tractor-trailer access. In a case where tractor-trailer access is not possible, owner or general contractor shall be responsible for transporting materials from delivering carrier to the installation site.

PART 5 - INSTALLATION:

Weather Conditions - Because the polyurethane agents are moisture or heat sensitive, the nighttime temperatures must be above 40 degrees with daytime temperatures around 50 degrees. These temperatures must be consistent for several days before and after the poured rubber installation period. Complying with these weather conditions will prevent poured bonded rubber from freezing which prevents proper curing.

Thickness - Overall depth of the poured bonded rubber will vary based on critical fall heights and installers test results. Depth of EPDM will be no less than 0.5". Installation is performed by technically trained GameTime approved specialists. Your GameTime dealer will schedule installation of playground surfacing to meet your requirements.

THICKNESS CHART

1' to 4' Critical Fall Height	1.5" to 2" Total Depth
5' Critical Fall Height	2" Total Depth
6' Critical Fall Height	2.5" Total Depth
7' to 8' Critical Fall Height	3" to 3.5" Total Depth

PART 5 - INSTALLATION (Continued)

Cold Joints - Areas in excess of 2,000 square feet or areas that require adjacent color pours will have a cold joint or seam. Although seldom visible, seams are necessary when large pads require more than one day pours.

Edges - Surface edges shall be flush, beveled or rolled. It is important to advise what type of edge will be required so that the appropriate amount of materials are ordered.

Flush - When curbing is provided around the outside perimeters of the pad, the poured bonded rubber will be adhered to the edge of the curbing so that the surfacing is flush. This allows for a smooth transition into the play area. However, the sub-base should be installed to allow the proper depth of poured bonded rubber so that the flush edge can be installed without having to fill voids by increasing the material depth. If the sub-base is not installed properly, using too much of the bonded rubber materials can cause the installer to run short which will require a change order to add additional materials for the project.

Beveled - When curbing is not provided for concrete or asphalt sub-bases, the installers will bevel the edge down along the edge of the pad. This type of edge can be sloped to provide a smoother transition but will require additional materials. If beveled at the edge of the use zones, the edge can be more round due to the depth of the poured bonded rubber. In this case, you may want to have a rolled edge added to allow a smooth transition for wheelchair users.

ADA Rolled - This is the type of edge to meet the requirements of ASTM 1951, Specifications for Determination of Accessibility of Surface Systems Under and Around Playground Equipment. The rolled edge will require additional materials in order to provide adequate ADA Wheelchair access. The total linear feet of the pad will need to be provided if the whole site is to be ADA compliant.

Keyway Cut - This type of an edge requires a trenched saw cut of ½" wide x ½" deep along the edge of the concrete or asphalt pad. The contractor or customer will be responsible for providing the keyway cut. There will be an up charge if the poured bonded rubber installer is asked to provide this cut. The poured bonded rubber will be beveled down into the saw cut where it will adhere preventing the exposure of a raw edge.

Mix Details - Since the recycled poured bonded rubber is a one step process, mix 6.4 pounds of binder with 40 pounds of recycled bonded rubber in a paddle type mortar mixer. Mix at a uniform rate for a minimum of 90 seconds to insure that the rubber material is coated thoroughly with the binder. Mixture is poured out in small areas and with a hand troweled, the rubber is installed at the appropriate depths.



PART 5 - INSTALLATION (Continued)

Cure Time - The poured bonded rubber will require 72 hours (3 days) to properly cure. Security is required by the owner during this time so to avoid unnecessary damages.

PART 6 - WARRANTY:

When used under playground equipment, GameTime's GT Impax recycled poured bonded rubber is warranted against defects in materials and workmanship for three (3) years.

Recycled poured bonded rubber is not to be used with water play equipment. There will be no warranty coverage if this product is used with water play equipment.

Ask you GameTime representative for a copy of our full GT Impax recycled poured bonded rubber warranty details.

PART 7 - MAINTENANCE

Ask your GameTime representative for a copy of our full GT Impax recycled poured bonded rubber maintenance details.



Poured Bonded Rubber Warranty

Playground Equipment

GameTime warrants the GT Impax recycled poured bonded rubber surface installed and maintained in accordance to GameTime specifications, under this contract agreement for a period of three (3) years commencing from the date of substantial completion. This limited warranty shall provide for 100% of the cost for necessary repairs caused by the failure of the GT Impax Poured Bonded Rubber due to workmanship and materials only, and pertains only to the surfacing material agreed to under this contract.

This limited warranty includes GameTime's obligation to only repair and/or replace any defective materials or workmanship in the surface area or surface areas that have failed during the first year of the three-year warranty period. A failed area or failed areas include edge raveling, delaminating, peeling, color loss or loss of integrity as a result of the GT Impax recycled poured bonded rubber degradation. Due to maintenance requirements, edge raveling, delaminating, peeling or loss of integrity in the second and third year of the warranty is limited to material replacements only. Labor cost for resealing and/or repairing the poured bonded rubber pad will be at the expense of the end user. Material replacement due to color lost carries a one-year warranty.

GameTime is under no obligation or responsibility to repair and/or replace the GT Impax recycled poured bonded rubber surface if damaged during the curing process (Unless specified in contract), damage by vandalism (including stains, cuts, burns, gouges, etc.), product misuse, abuse or alteration, improper slab or base or sub-base design or construction, improper drainage, improper or lack of specified required maintenance, any foreign residue that may be deposited on the surface, normal wear and tear (including slight color variations, and color fading), damage from sharp objects (high heels, spikes, etc.), problems caused by moisture, alkali, hydrostatic pressure, cracking, shifting, or lifting of the substrate, or acts of God.

All warranty claims shall be made in writing to GameTime within thirty (30) days after the Owner has knowledge thereof, but in no event later than thirty (30) days after expiration of the warranty period. The written notification from the Owner shall include the following: the date of the first notice of the failure, details of the failure, photos of the failed area and a request for a warranty claim meeting with GameTime at the installation site (if applicable). GameTime shall not be responsible for warranty claims for any notices received from the Owner after thirty (30) days of Owner's first knowledge of the failure.

GameTime shall determine the validity of all claims after sufficient evidence has been gathered. GameTime shall then replace, repair or make a refund for any claims validated by it. Any refund, credit or allowance provided to the Owner on a warranty claim is exercisable only if said allowance is used to accommodate replacement with a GT Impax recycled poured bonded rubber surface.

Any dispute as to whether and to what extent there is a GT Impax recycled poured bonded rubber surfacing failure and a subsequent valid warranty claim within the meaning of this warranty shall be initially dealt with by joint investigation and discussion between GameTime and owner in order to achieve a mutually agreeable solution. If such a solution cannot be reached within thirty (30) days, then either the Owner or GameTime shall submit the matter to an arbitrator who is a member of the American Arbitration Association and who shall make a determination in accordance with the rules and regulation of said American Arbitration Association. The decision of said arbitrator shall be binding on both parties.



This limited warranty is exclusive of the underlying material (e.g. existing surface, existing or new asphalt, concrete, base, sub-base or sub-grade). If the underlying material fails for any reason whatsoever (including hydrostatic pressure, cracking, shifting, heaving), then GameTime warranty shall be rendered invalid. If the underlying material is concrete, a "curing agent" is NOT allowed; as it will probably cause delamination of the GT Impax recycled poured bonded rubber. Additionally, there is no warranty against surface cracking along expansion joints and underlying cracks, or separating from an adjacent border, curb or walkway. This limited warranty does not include discoloration as a result of ultraviolet rays, unapproved cleaning materials or vandalism. WARNING: Surface temperatures can prove dangerous under warm weather conditions. Shoes and/or socks must be worn during warm weather conditions.

Owner agrees that it will not, under any circumstances, make alterations to the GT Impax recycled poured bonded rubber surface without the written authorization of GameTime. Any unauthorized alteration by the Owner shall result in the immediate termination of all warranties for the GT Impax recycled poured bonded rubber surfacing and shall also give rise to the duty of the Owner to hold harmless, defend and indemnify GameTime from any claim, suit or cause of action, personal injury, death, or property damage arising out of or related to said alteration.

This limited warranty is expressly made in lieu of any other warranties and is exclusive to the original Owner. Owner acknowledges that the limited warranty will be voided if the Owner fails to follow the GameTime Maintenance Guidelines provided by GameTime. Owner agrees that in no event shall GameTime have any liability to Owner for loss of use or loss of profits or any form of consequential damages. NOTE: The following chemicals can cause potential damage to the GT Impax recycled poured bonded rubber and should be avoided: disinfectants, concentrated bleach, gasoline, diesel, hydraulic and lubricating oils, weak acids and organic solvents.

If the contract price is not paid in a timely manner as per the terms and conditions of the agreed contract, the limited warranty is automatically voided. Any damages to the surface during the curing period will be repaired or paid for at the Owner's expense. This limited warranty does not lessen or eliminate any other contractual obligation of Owner to GameTime.

Warrantor: GameTime
P.O. Box 680121, Fort Payne, AL 35968
800-235-2440

Order number:

Name of project:

Customer:

Location:

Date of installation:

Representative:

Date:



MAINTENANCE GUIDELINES Bonded Rubber

Outdoor Installations:

Hose off entire playground surface to remove food, drink, sand, dirt and loose debris. This can be part of a monthly routine maintenance program. A pressure washer should not be used.

On heavily stained isolated spots, while surface is damp from hosing, apply a sufficient amount of a mild household or commercial detergent. For adequate coverage, use a hand-held spray bottle, and scrub thoroughly with a 10-inch medium basin bristle scrub brush. Repeat as necessary on extremely tough stains.

These cleaning procedures provide no guarantee of stain removal. However, a stain may become more difficult or even impossible to remove if not addressed immediately.

For general cleaning, apply a mixture of full strength mild household or commercial detergent and water to the damp surface. Be sure to follow the directions for the use on the cleaner you may choose from a local supplier. Using a garden pump sprayer, apply mixture to an area approximately 4 feet by 4 feet in size. Using the 10 inch medium basin bristle scrub brush, clean each 4' x 4' section and then repeat this process until the entire playground has been thoroughly cleaned.

Once the entire surface has been cleaned, rinse thoroughly using a garden hose with nozzle attachment.

Tips For Best Results:

Perform cleaning during early morning or late afternoon so that your cleaner will have time to react without evaporating.

Area must be damp prior to applying cleaning solution.

Clean in small 4 ft. x 4 ft. sections so that you can make sure you scrub the surface thoroughly so to eliminate the possibility of dirty spots and/or streaking in areas that have been missed.

Do not use any steaming or hot water machines for cleaning as this may cause delamination of surface.

Recommended Cleaning Aids:

Mild household or commercial detergent
Hand Spray Bottle
Half-Gallon Garden Pump Spray
10-inch medium bristle scrub brush
Garden hose with spray nozzle



Poured Bonded Rubber Maintenance Guidelines continued

Indoor Installations:

Weekly or bi-weekly as needed, damp mop as much of the surface as possible.

For isolated stains, apply a mild household or commercial detergent and scrub the area with a basin straw (medium bristle) brush.

Do not use any steaming or hot water machines for cleaning as this may cause delamination of surface.

Drying time may vary depending on indoor temperatures.

Recommended Cleaning Aids:

Mild household or commercial detergent

Hand Spray Bottle

10-inch medium bristle scrub brush

Note: The following chemicals can cause potential damage to the GTImpax Poured Bonded Rubber Surfacing and should be avoided on both outdoor and indoor installations:

Disinfectants

Concentrated Bleach

Gasoline

Diesel, Hydraulic and Lubricating Oils

Organic Solvents

Weak Acids