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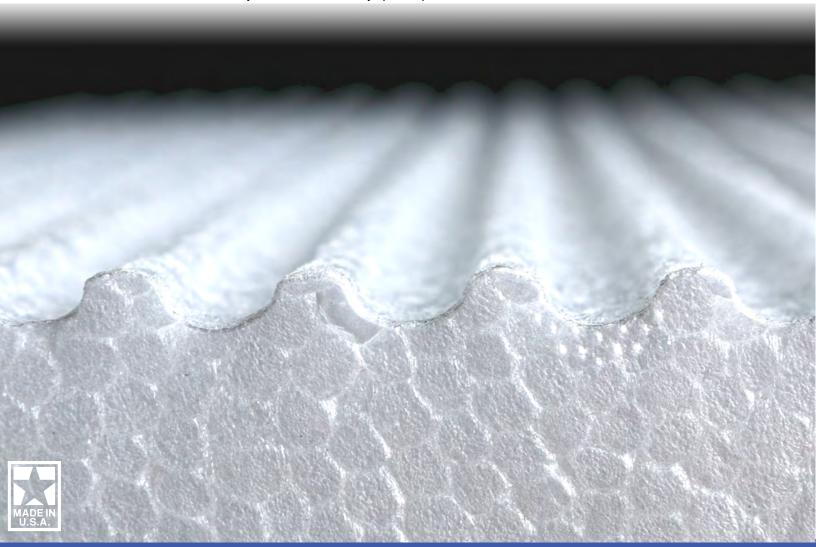
PART A TECHNICAL DATA SHEETS



DYNAMIC SHOCK PAD & DRAINAGE BLANKET

GeoFlo®+ is a patented moisture conducting, non-absorbent, geo-composite shock pad made from polyolefin materials. GeoFlo+, available in both solid core and perforated core, is a pre-fabricated system that consists of a formed expanded polypropylene core. It is a highly resilient closed-cell expanded bead product, and is an ideal energy absorbing material for sport surfaces that requires impact protection and shock absorption. The use of GeoFlo+ greatly reduces risk factors associated with poor subsurface soils.

Installation provides an uninterrupted vertical-to-horizontal flow path for superior rainfall evacuation and enhanced G-MAX performance without changing the ball-action or feel under-foot. The integrity of the systems expansion and contraction capabilities is maintained by the use of the GeoClip™ system which holds the GeoFlo+ in place during the installation of the turf system. The GeoClip also decreases the risk of wind negatively impacting the installation process. The GeoClip allows each individual pad to naturally react to changing temperature and humidity conditions while assuring the turf installation team is able to perform on a secure monolithic work surface. The proper installation of the GeoFlo+ system reduces G-MAX by up to 50 points.



PHYSICAL PROPERTIES

Tensile Strength
Tensile Elongation
Tear Strength
Thermal Conductivity (K)
Thermal Resistance (R)
Coeff. of Lin. Therman Expansion
Service Temperature
Water Absoption
Compressive Creep
Flammability

TEST METHOD

ASTM-D3575 ASTM-D3575 ASTM-D3575 ASTM-C177 ASTM-C177 ASTM-D696 ASTM-D3575 ASTM-D3575/C272 ASTM-D3575 FMVSS-302

SAE

55.5 psi % 18 lbs/ft 13 BTU-in/ft2-hr-9F 0.25 @70°F 3.9 in/in/°F x 10-5 5.7 °F (Max) 212 % < 5.0 % (psi) 1.2(2.0)<4.0in/min **Pass**

DATA

PLEASE NOTE: For standard GeoSurfaces Products. Values shown are typical of the product and should not be construed as specification limits.

PROPERTIES

GeoFlo+ is multi-directional (isotropic) in nature, so unlike traditional extruded products, which yield different properties along the extrusion, vertical and horizontal axis, the properties of the GeoFlo+ products are the same for a given density along all 3 axis, regardless of orientation.

RESILIENT POLYPROPYLENE SHOCK PAD

Nominal Size: 4' x 6' / Thickness Options: 15 mm,20 mm, 25 mm Horizontal Drainage: 50" per Hour Minimum Vertical Drainage: 100" per Hour Minimum (On Perforated Core) Maximum Initial G-MAX Less than 135

SAFETY FEATURES

Guaranteed Maximum G-Max of field of 135 during 8-year warranty period of turf (ASTM F355 or ASTM 1936) as a system test with infill.

Guaranteed 1.3 HIC rating during 8-year warranty period of turf (ASTM F355-16e1) as a system test with infill.

RESISTANCE

Flammability Resistance TEST FMVSS-302: Pass Fuel Immersion Test Coast Guard (Fuel B): Pass Chemical Resistance (1 Hour Exposure to Solvents): Pass





Perforation Pattern

•	•	4'	•	•
0	0	0	0	
0	O Finished Hole Size - 5/ Perforator Pins a	O 8" Diameter (24 Total) re 1/2" Diameter	0	
0	0	0	0	6'
0	0	0	0	
12"	0	0	0	
	• O	0	0	

PART B WARRANTY



GEOFLO+ 25-YEAR PRODUCT WARRANTY TERMS AND CONDITIONS

- **1.** <u>LIMITED WARRANTIES:</u> The terms and conditions of this Limited Warranty are as follows. GeoSurfaces, Inc. ("GeoSurfaces") warrants to the Owner of the playing field(s) ("Owner") at which the GeoFlo+ Pad ("Pad") has been installed that for a period of twenty-five (25) years from date of purchase (the "Warranty Period"), the Pad will remain free of defects in materials and workmanship. The Pad will not degrade under normal use as a shock pad or drainage blanket for artificial turf sport surfaces and that as a system (Pad with infill turf) will not exceed a field average G-Max of 135 G's as tested according to the ASTM 1936 using the F-355-A Missile when field test conditions do not fall below 40° F. Field must be free from any frost or contaminants, provided the initially installed turf remains over the Pad and has never been replaced (the "G-Max Guarantee"). The Pad will be part of an artificial turf surface system that will not exceed a field average Head Injury Criterion (HIC) result of 1000 from a 1.3 meter drop height as tested according to the ASTM F355-16 standard missile E. The field average is defined as the overall average of the field test locations according to the testing specification. Test conditions above 40° F with field free of any frost or contaminants, provided the original turf initially installed over the Pad has never been replaced (The "HIC Guarantee"); (collectively, the "Limited Warranties").
- **2. PROCEDURE FOR WARRANTY CLAIM:** In the event the Pad fails to comply with these Limited Warranties during the Warranty Period, Owner shall provide GeoSurfaces' written notice within thirty (30) days after its first discovery of non-compliance and allow GeoSurfaces an opportunity to inspect the Pad (in place as originally installed) before modification or alteration of the Pad in any way.
- **3. EXCLUSIONS:** Notwithstanding any provision herein, GeoSurfaces does not warrant and shall not be responsible for, the Limited Warranties shall not cover, and Owner shall not be entitled to recover, (for breach of contract, tort, strict liability, or otherwise), any loss, liability, claim, damage, cost, expense, or defect (collectively, a "Claim") caused by, in whole or in part, or arising from any party's failure to install, use, and maintain the Pad strictly in accordance with GeoSurfaces' Installation and Manufacturer's Standards. Any party's improper handling, use or protection of the Pad, including, but not limited to excessive static loads (in excess of 35 PSI for a period greater than 35 minutes) or dynamic loads (impact in excess of 110 PSI) or breaking, tearing or improper cutting of the Pad. Any party's improper or inadequate site preparation, including, without limitation, improper base material, grading, compaction, or material usage in perimeter drain collectors and other drain collectors. Any improper or inadequate site drainage, including without limitation, lack of adequate drainage systems,

gutters, collectors, channels, and water diversion mechanisms or the failure of the downstream drainage system to adequately convey the flow of water. Any permanent depression of the surface of the Pad that is less than 5 mm in depth, any cause or event that is not reasonably foreseeable by GeoSurfaces, including acts of God, extreme weather events, fires, floods, lightning, earthquakes, landslides, explosions, riots, wars, hurricane, sabotage, terrorism, vandalism, accident, restraint of government, governmental acts, and injunctions or any condition related to the soil, base, earth, or subsurface upon which the Pad may be installed, including without limitation, soil expansion, shifting, contraction, subsidence, compression, or erosion, improper or inadequate selection, use, installation, maintenance, repair, or replacement of the field's artificial turf system, including any infill. Any cumulative exposure of the Pad to sunlight or any other source of Ultraviolet light for more than ten (10) calendar days. Any contamination of the infill with sand, dirt, or other substances.

G-MAX & HIC GUARANTEE: The failure to install and maintain the Pad with a minimum depth of 17mm (5/8") of infill in the turf system will void the G-Max portion of the Warranty. The failure to install and maintain a minimum infill depth of 25 mm (1") of infill will void the HIC portion of the Warranty. As to the G-Max and HIC Guarantees, any Claim occurring after the original turf that was initially installed after the Pad has been replaced, except that prior to each turf/infill replacement during the warranty period, if the Owner requests prior to turf/infill replacement in writing and allows for GeoSurfaces to inspect the Pad and approve the replacement turf/infill system, GeoSurfaces may, at GeoSurfaces' sole discretion, agree in writing to extend the G-Max and HIC guarantees for the replacement turf/infill life cycle but in any case no longer than the original warranty term; (collectively, the "Exclusions").

- **4.** <u>REMEDY</u>: As Owner's sole and exclusive remedy for any Claim relating to or arising from the Limited Warranties or Pads, and provided the Claim was not caused by or arising from any Exclusion, GeoSurfaces will deliver to the Owner and install new Pad to replace the non-conforming Pad. The installation shall include the temporary removal and repair or replacement of the artificial turf and infill over the affected area. GeoSurfaces shall have discretion as to whether to repair or make replacement of the artificial turf and infill. If Owner decides to replace the entire surface for reasons other than a breach of GeoSurfaces Warranty, Owner shall give GeoSurfaces reasonable advance notice of replacement of the surface so that a GeoSurfaces representative can be present at the time of the turf replacement to inspect the GeoSurfaces Pad.
- 5. <u>LIMITATION OF LIABILITY</u>: OWNER'S SOLE AND EXCLUSIVE REMEDY FOR ANY AND ALL CLAIMS ARISING OUT OF OR RELATING TO THE PURCHASE, USE, OR CONDITION OF ANY PAD OR THIS LIMITED WARRANTY UNDER ANY LEGAL THEORY, INCLUDING WITHOUT LIMITATION, BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE (INCLUDING NEGLIGENT MISREPRESENTATION), OR STRICT LIABILITY, SHALL BE LIMITED TO THE REMEDIES PROVIDED IN SECTION 4 (REMEDY) OF THIS LIMITED WARRANTY. IN NO EVENT SHALL GEOSURFACES BE LIABLE FOR, AND OWNER HEREBY WAIVES ANY RIGHT TO RECOVER, ANY PUNITIVE, SPECIAL, CONSEQUENTIAL, OR INDIRECT LOSSES OR DAMAGES, ALL OF WHICH OWNER EXPRESSLY DISCLAIMS. GEOSURFACES' TOTAL AGGREGATE LIABILTY TO OWNER FOR ANY AND ALL CLAIMS UNDER ANY LEGAL THEORY ARISING FROM OR RELATING TO THE PAD, ANY ACTION OR INACTION OF GEOSURFACES, OR THIS LIMITED WARRANTY, SHALL NOT EXCEED THE TOTAL CONSIDERATION OWNER PAID FOR THE NON-CONFORMING PAD.

6. <u>DISCLAIMER OF WARRANTIES</u>: THIS LIMITED WARRANTY AND ITS REMEDIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL, WRITTEN, STATUTORY, EXPRESS OR IMPLIED. GEOSURFACES DISCLAIMS ALL STATUTORY AND IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS.

GENERAL TERMS: This Limited Warranty shall be governed, interpreted, and enforced solely under laws of the State of Louisiana, irrespective of conflict of laws principles. This right shall not be waived, altered, or modified except in writing signed by the Parties and shall entirely supersede and replace any previous representations or warranties made in relation to the Pad. This warranty may only be assigned by GeoSurfaces in its sole discretion. Failure to enforce any provision of this Limited Warranty shall not constitute a waiver of any other provisions.

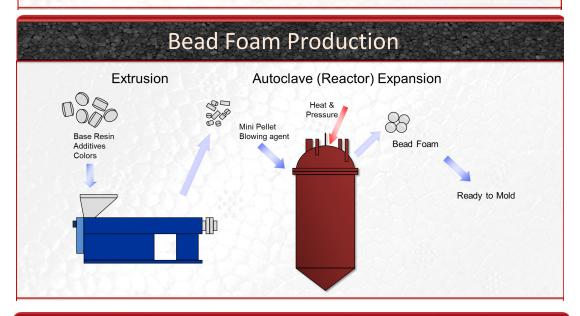
Project Name:	
Owner's Name & Address:	
Date of Purchase:	
SIGNATURE	DATE / /

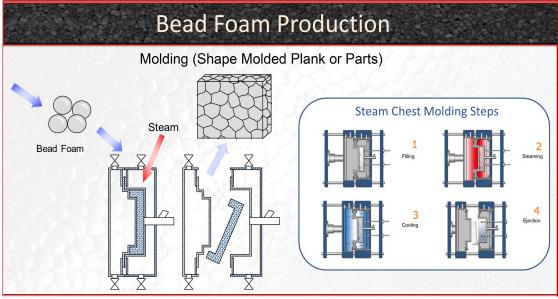
PART C THE SCIENCE BEHIND GEOFLO+

Tencate Plank White EPP

BENEFITS

- √ Repetitive Energy Absorption
- ✓ Elasticity and Toughness
- √ Fatigue Resistance
- √ Flexibility and Resiliency
- √ Impact Resistance
- √ Hot & Cold Temperature Performance
- √ Ease of Fabrication for Underlayment Pads
- ✓ Industry Standard material for sports surfaces
- √ Isotropic same impact performance across all 3 axes
- √ No VOC's, HFC's or CFC's used to produce
- √ No Restricted Substances; Meets RoHS, REACH, and CA Prop 65, etc.





Recycling Information

ARPRO Expanded Polypropylene (EPP)1:

SPI Symbol

SAE Symbol



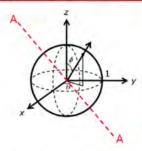


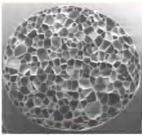


- SPI = Society of the Plastics Industry. SPI is now PIA (2017). SPI (PIA) Symbols from SPI (PIA) Guideline for Resin ID Codes.
- SAE = Society of Automotive Engineers.
- SAE Symbols per SAE J1344.

ARPRO EPP can be shredded and remolded using standard EPP molding equipment. ARPRO EPP is also melt processable, which means it can be remelted back to the base PP resin.

Bead Foam (a.k.a. Particle Foam) Characteristics





JSP Expanded Polyolefin Bead foam is spherical in shape. Each bead particle has an outer shell that contains the inner cell structure and acts to enhance the performance by acting as a protective layer and to facilitate bonding to the adjacent particles during steam chest molding (when a molded shape is created). The cell structure was created in an inert gas (CO₂) batch suspension process which allows for uniform cell proportions across all 3 axes. As a result, the ability to manage energy is also the same across all 3 axes. This makes fabrication simpler, since product orientation has no effect on impact performance

Bead Foam (a.k.a. Particle Foam) Characteristics

ISOTROPIC: i-so-trop-ic (īsə träpik,- tropik)

Adjective

Origin: PHYSICS (of an object or substance) having a physical property that has the same value when measured in different directions. Uniformity in all orientations.

Antonym: Anisotropic



Tencate Plank White EPP

Sports Surface Testing per ASTM F355 & F1936

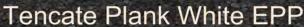
ASTM F355 is the "Standard Test Method for Impact Attenuation of Playing Surface Systems and Materials" and ASTM F1936 is the "Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field".

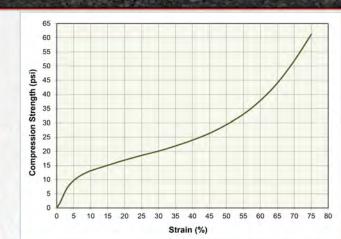
ASTM F355 Procedure A covers the overall test method and ASTM F1936 specifies the method for measurement in the field on an installed synthetic turf playing surface.

✓ The test procedure involves dropping a 20 pound impacting missile three times at each location from a consistent height of 24 inches. The test is typically performed at 10 locations. The locations are based on the primary sport and the discretion of the tester. The first drop conditions / compacts the loose infill. This value is recorded but not included in the location average. The second and third drops are recorded and averaged for the location average. The location averages are used to determine the field average.

The ideal material offers a combination of good energy management and long term resiliency over a wide temperature range. JSP Recommends the APRRO EPP 33XX (White) Series material.

Stress values with turf and fill tend to be ~ 1 psi range for comparison – based on impact test.

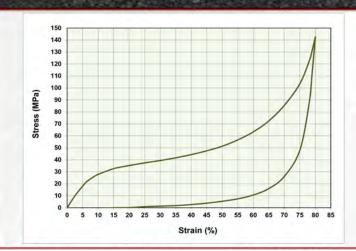




Example

1.9 pcf Stress Strain Curve Quasi-Static (low speed ~ 0.5 in/min)

Tencate Plank White EPP

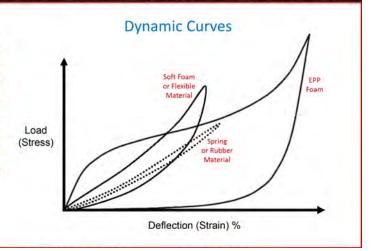


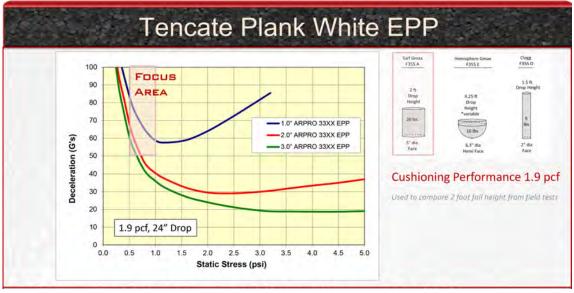
Example

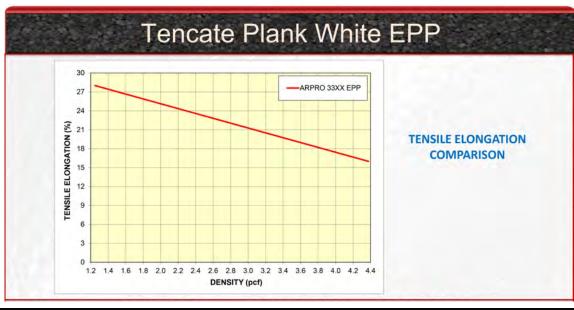
1.9 pcf Stress Strain Curve Dynamic (high speed ~ 5 mph)

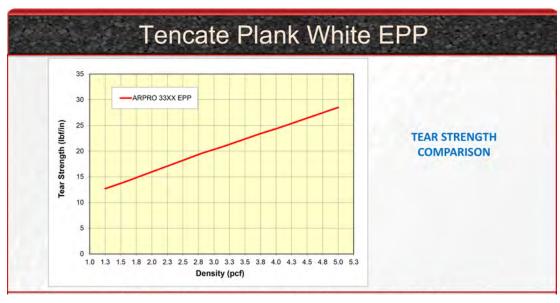
Energy Management, Types of Stress-Strain Curves

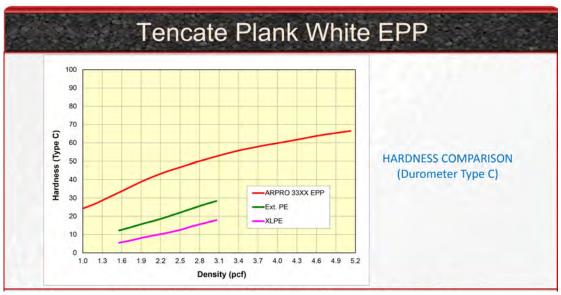
The amount of energy absorbed is a function of the area under the curve (within the impact and rebound portion of the curves). Of all resilient foams, pound-per-pound, EPP offers the most energy absorption and the ability to perform multiple impacts.

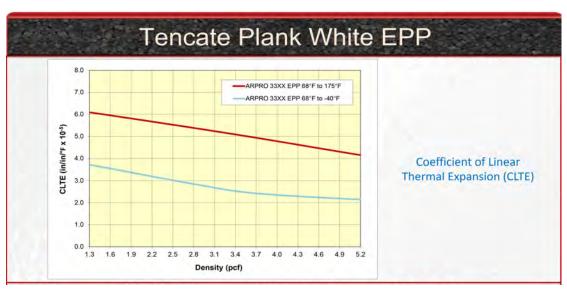


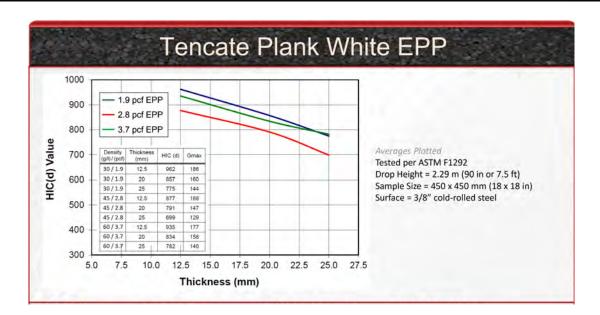












Tencate Plank White EPP

PROPERTY	TEST METHOD	UNITS	RESULTS
Density	ASTM-D3575	pcf (lb/ft ³⁾	1.9
	AS IN-D3575	g/l or kg/m ³	30
Compressive Strength @25% Strain @50% Strain @75% Strain	ASTM-D3575	psi	19 29 60
Compression Set 25% 50%	ASTM-D3575	%	9 20
Tensile Strength	ASTM-D3575	psi	54
Tensile Elongation	ASTM-D3575	%	26
Tear Strength	ASTM-D3575	lbf/in	15
Flexural Strength	ASTM-D790	psi	43
Coefficient of Linear Thermal Expansion 68°F to -40°F 68°F to 176°F	ASTM-D696	in/in/°Fx10°5	3,3 5.7
Water Absorption	ASTM D2842/ ASTM-C272	%/lb/in² x 10-2	<5.0/5.6
Flammability	FMVSS-302	< 4 in/min	Pass
Chemical Resistance Auto fuels, fluids, solvents)	Various	1 hr exposure	Pass

Property Data for EPP

1.9 pcf = ARPLANK

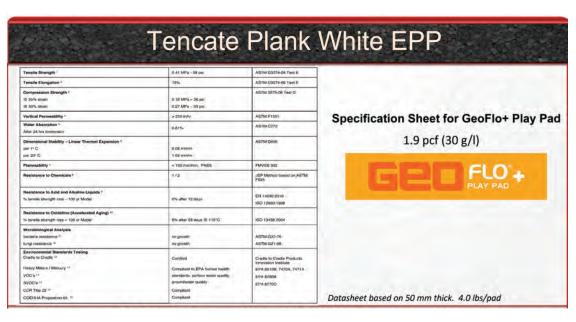
Tencate Plank White EPP

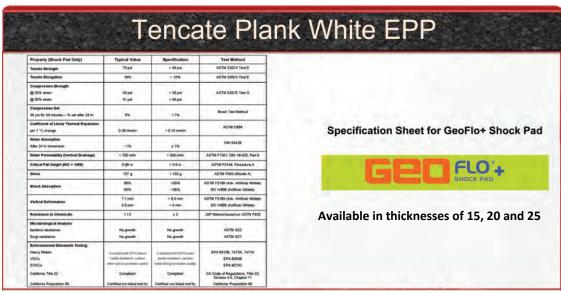
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Density	sity ASTM-D3575	pcf (lb/ft ³)	1.9
Delisity		g/l or kg/m ³	30
Compressive Strength @25% Strain @50% Strain @75% Strain	ASTM-D3575	psi	19 29 60
Compression Set 25% 50%	ASTM-D3575	%	9 20
Tensile Strength	ASTM-D3575	psi	54
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Coefficient of Linear Thermal Expansion 68°F to -40°F 68°F to 176°F	ASTM-D696	in/in/°F×10°	3.3 5.7
Water Absorption	ASTM D2842/ ASTM-C272	%/lb/in ² x 10 ⁻²	<5.0/5.6
Flammability	FMVSS-302	< 4 in/min	Pass
Chemical Resistance Auto fuels, fluids, solvents)	Various	1 hr exposure	Pass

Property Data for EPP

1.9 pcf = ARPLANK

Tencate Plank White EPP ARPLANK* EPP19WN ARPRO* Expanded Polypropylene (EPP) Polypropylene >PP< 85 recycling code 19 pd (30 gl) Fabricated Panel Varies 0.55 to 1.0 in (14 to 25 mm) XX 12 (XX m²) VX V xwm) XX in (X.X mm) 0.55 in (14 mm) = 0.044 (b/h² (0.42 kg/m²) 0.55 in (14 mm) = 0.044 (b/h² (0.42 kg/m²) 0.75 in (19 mm) = 0.154 (b/h² (0.57 kg/m²) 1.0 in (25 mm) = 0.15 (b/h² (0.75 kg/m²) 54 pai (300 kPa) >100 in/b² (254 cm/h²) >100 in/b² (254 cm/h²) Specification Sheet for EPP 1.9 pcf (30 g/l) ARPLANK PRELIMINARY DATA ASTM F1292 (EN 1177 Cotigot Fail Height (CFH); vii n (25 mm) black Critical Fail Height (CFH); vii artificial trail Critical Fail Height (CFH); vii EPDM surface Shock Absorption Dimensional Stability - Certificient of Linear Thermal Expansion (CLTE) per 1°C (1.8°F) Environmental Standards Testing EU 0.11 mm/m (0.0013 inft) ISO 4897 (ASTM D6341, ASTM D696) 2.20 mm/m (0.0264 inft) ISO 4897 (ASTM D6341, ASTM D696) RoHS, DIN V 18035-7, ESSM 105-d EPA TSCA, Cal Prop 65 CEPA & Product Stewardship Requirements EN 12225 (ASTM G21, ASTM G22) Canada Resistance to Bacteria, Mold and Fugus Resistance to Acid and Alkaline Liquids No growth Nearstance to Acid and Alkaline Liguids % Tensile Strength loss - 100 yr model Resistance to Oxidation % Tensile Strength loss - 100 yr model CE Declaration 0% after 12 days EN 14030 (ASTM D6389) 6% after 56 days @110°C EN 13438 (ISO 11357-6, ASTM D3895)





Tencate Plank White EPP



MATERIAL CERTIFICATION



JSP certifies that all ARPRO Expanded Polypropylene (EPP) Bead Foam Products used in the manufacturing of the GeoFlo+ and MaxFlo+ shock pad and Play Pad products contain no Chlorofluorocarbons (CFC's), Hydrochlorofluorocarbons (HCFC's), Hydrocarbons (HC's), Volatile Organic Compounds (VOC's) including Semi-Volatile Organic Compounds (SVOC's) and Polycyclic Aromatic Hydrocarbons (PAH's), nor do they contain any Perfluoroalkylated Substances (PFAS); or other ozone depleting substances. All ARPRO Expanded Polypropylene (EPP) Bead Foam Products are expanded using a non-flammable inert gas blowing agent, and do not contain any residual VOC's or Flammable Compounds. This certification applies to all products molded with ARPRO Expanded Polypropylene (EPP) Bead Foam material in accordance with the JSP's established manufacturing process standards and procedures.

PART D INSTALLATION INSTRUCTIONS



- 1. Check surface planarity using a string line in a maximum 50' wide length to assure grade tolerance is within the specifications of the project documents.
- 2. Check surface planarity using a string line in a maximum 50' wide length to assure grade tolerance is within the specifications of the project documents.
 - 3. Verify that all materials necessary for the installation are on site.
 - 4. Verify environmental conditions are adequate for the installation of the panels. Wind conditions with gust above 20 mph may make the panel installation difficult.
- 5. When installing on a stone base (porous or non-porous), have proper tools or equipment available to smooth out stone imperfections that may be caused by the equipment used to stage or move materials on to the stone base.
- 6. If carts or other wheeled platforms are used to stage material, make sure tires are air inflated and have a psi of less than 35 pounds. The wider the tire utilized on the stone base the more effective it will be at eliminating potential stone movement.







All GeoFlo+ panels (regardless of size) should be covered when not being used in the direct installation process.

These panels contain no UV stabilizers and direct sunlight will damage the panels. This type of damage cannot be repaired and panels experiencing UV degradation must be replaced at the cost of the contractor. DO NOT LEAVE PANELS EXPOSED TO SUNLIGHT AT ANY TIME OTHER THAN DURING THE DIRECT INSTALLATION OF EACH INDIVIDUAL PALLET. Deterioration or damage caused by direct sunlight will not be considered a warranty item.

If the panels are being installed on any type of stone base, a geotextile fabric is recommended to be installed on top of the stone and under the panels.

The geotextile fabric may be laid out end to end or side to side on the stone surface. Direction of the geotextile fabric does not alter the function or use of the panels. If the panels are being installed on concrete or asphalt, geotextile fabric under the panels is not required. A clip system may be provided to help with wind abatement and to stabilize the panels during turf panel placement. The clips are optional and are not required. **See Fig B**

It is recommended to start the installation of the panels on one end of the field and work toward the longest distance of the field. See Fig C

The panels have a top and bottom. For perforated systems, the drainage channels (ridges) are placed on the bottom. For non-perforated systems, the drainage channels are placed facing up. **See Fig A**For wind abatement during installation, it is recommended to place geotextile fabric from anchor board to anchor board over each 15' section of panels installed.

After installation of the top layer of geotextile fabric, it is recommended to roll out the pre-determined turf panel over the section of panels to further assist with wind abatement or panel movement. **See Fig C**

It is allowable to staple the panel to the edge anchor board. Panels should be installed with the horizontal drainage channel openings toward the collector trenches or pointing down the slope toward the lowest elevation. Panels should be installed with a ¼" gap for expansion and contraction. If the clip system is utilized, the clips will act as the expansion and contraction spacer. Trim panels with a typical box knife or turf blade for precise fit. Cut sections may be utilized in other areas of installation if applicable.

Do NOT cover perimeter collector drainage trenches with the bottom layer of geotextile fabric unless directed by the Owner's representative to do so.

On non-perforated systems, perforated panels must be installed over the collector drainage trench sections. The top layer of geotextile fabric can be stretched from perimeter anchor board to perimeter anchor board. Make sure all geotextile fabric, bottom layer and/or top layer are porous.









Additional Recommendations

It is not recommended to drive motorized equipment directly on the panels prior to the installation of the top geotextile fabric. Once this geotextile fabric is installed, it is acceptable to drive light equipment (less than 2500 lbs) with turf tires with a psi of less than 35 pounds to roll out turf panels.

Do not install panels ahead of the turf sections that are being rolled out. Uncovered panels or unsecured panels are susceptible to movement in winds. DO NOT LEAVE PANELS EXPOSED TO SUNLIGHT AT ANY TIME OTHER THAN DURING THE DIRECT INSTALLATION OF EACH INDIVIDUAL PALLET.

Do not place a vehicle on the panels and turf system of more than 6000 lbs. Tire pressure must not exceed 35 psi on any vehicle placed on the panel and turf system. Static loads greater than 6000 lbs will void the product warranty. No forklifts, or construction equipment (skid steers, loaders, excavators or other) should be allowed on the panel or turf surface.

For event loading including stages or other apparatus that may be installed on top of the turf system, weight distribution panels designed for artificial turf should be utilized.

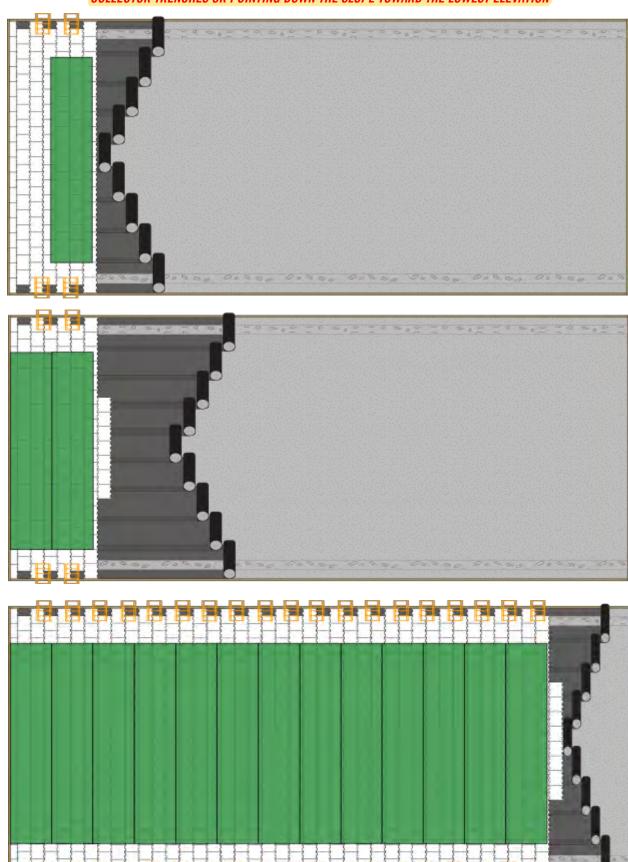
Recommendations for Infill Installation in Turf Panels

- 1. Infill should be placed using broadcast spreaders with turf tires with the psi on the tires never exceeding 35 pounds.
- 2. To avoid wrinkling, infill equipment must be driven slowly with wide, sweeping turns. If possible, turn off the turf surface and drive in only straight lines while on the turf surface.
- 3. To avoid wrinkling, it may be necessary to drive the broadcast spreader in reverse for the initial passes of infill material installation.
- 4. It may be necessary to use partial loads of infill to lessen the weight until the turf system has enough infill weight installed to stabilize the turf backing.

For additional information, comments, or questions, please call your dealer or email us at sports@tencategrass.com

INSTALLATION YOUTUBE VIDEO - https://youtu.be/ToY1uwlXiV8?feature=shared

PANELS SHOULD BE INSTALLED WITH THE HORIZONTAL DRAINAGE CHANNEL OPENINGS TOWARD THE COLLECTOR TRENCHES OR POINTING DOWN THE SLOPE TOWARD THE LOWEST ELEVATION



PART E GEOSURFACES - WHO WE ARE

WE DON'T MAKETURF. WE MAKE TURF AWESOME.

Quality natural grass is what athletes prefer. So that is our goal - the feel, the traction, the speed, and the temperature of a great natural field - packaged in one that is resistant to rain, can be used for more hours of play, and will remain green year-round.



Shock Pad

Impacts, firmed, drainage, consistency

Turf Carpet

Aesthetics, ball behavior, skin friction, heat

Infill

Traction, speed, firmness, heat, consistency

Turf with rubber infill over stone just can't do it all. If you want cushioning for safety, your field gets too soft. If you want firmness and speed, your field gets too hard. And regardless, they are all HOT. It is common knowledge that surfaces designed to meet performance standards both today and in the future utilize a more sophisticated system approach, optimizing each element for their specific functions.

Traction

A recent study from the University of Georgia showed how lower leg injuries often occur in the transition areas on the field, when a player goes from one "feel" to another. This confirms why athletes want a surface with minimal variability, especially when it comes to traction. We all see the rooster tails of rubber during games. That means the surface is changing as the rubber infill displaces, resulting in a less stable and less consistent surface





PART F THE GEOCOOL ADVANTAGE









HIGH-PERFORMANCE COOLING AGENT WITH ULTIMATE TEMPERATURE REDUCTION

GeoCool™ is an innovative cooling agent that provides heat absorption and surface disbursement for reduction in temperatures. GeoCool can be used with SBR rubber granules and silica sand infills. It is not organic and therefore eliminates the problems associated with infills—decay, flotation. organic dust. migration (due to wind, rainfall, and foot traffic) and the need for constant watering of the turf to maintain efficacy.

GeoCool is an inorganic oolitic ("egg mineral shaped") calcium carbonite ("aragonite") created — and constantly renewed—in shallow sea beds. It is 100% recyclable, neutralizes some odors, and is virtually dust-free. It is non-toxic—in fact, calcium carbonite has been ingested by humans for eons.



GeoCool has a specific gravity similar to sports field sand which means it will not float in heavy rain events and will not blow away in dry, windy environments.

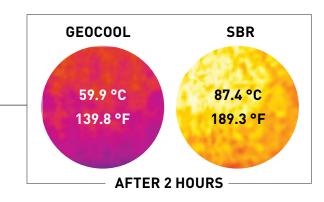
KEY ATTRIBUTES OF GEOCOOL:

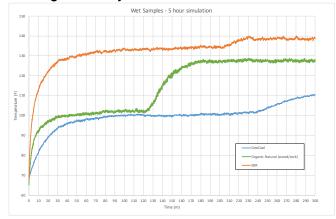
- Surface temperature reduction through heat absorbtion
- Resistant to decay, rot and mildew
- PVC and vinyl free
- Contains no silica
- Lead content: < 0.25 ppm
- Permeability: 220+ in/hour
- Low dust emission: 114 micrograms/ meter3
- Prop 65 compliant

SUPERIOR TEMPERATURE REDUCTION

After two hours of exposure to a heat source, turf filled with GeoCool was measured to be 50° F COOLER than turf filled with SBR granules.

GeoCool has a unique crystalline structure that aids in natural heat reduction: It is a mineral with a high surface area and thus high micro-porosity. As a consequence, GeoCool is very hydrophilic (it loves water)—it absorbs and captures a high amount of moisture from the atmosphere or when watered. And as the moisture in GeoCool granules evaporates, the playing surface and athletes on it cool significantly.





HIGH-PERFORMANCE COOLING AGENT

GeoCool is a high-performance cooling solution that tests well against FIFA standards.

- FIFA Quality Pro range
 - Ball Rebound
 - Shock Absorption
 - Deformation

GeoCool has very similar energy restitution to natural grass, which results in better ball handling and behavior for players.

SUSTAINABLE SOLUTION

GeoCool is THE environmentally responsible additive.

GeoCool is biogenic (produced by living organisms) and as it is generated, carbon dioxide in the atmosphere is reduced. GeoCool is truly sustainable as the material is constantly being replenished.

GeoCool is dredged, not mined – unlike other additives like silica and zeolite. This means a reduced carbon footprint as dredging uses less fuel-intensive methods.

GeoCool does not contribute to the microplastic issue affecting our oceans. It is not synthetic and can be fully recycled or repurposed.

PART G RECYCLYING SOLUTIONS



cyclyx ExonMobil

SOLVING FOR

TURF

CIRCULARITY



Learn more at turfrecycling.us

products.





THE INDUSTRY'S FIRST-EVER, TOTAL TURF PRODUCT-TO-PRODUCT RECYCLING SOLUTION

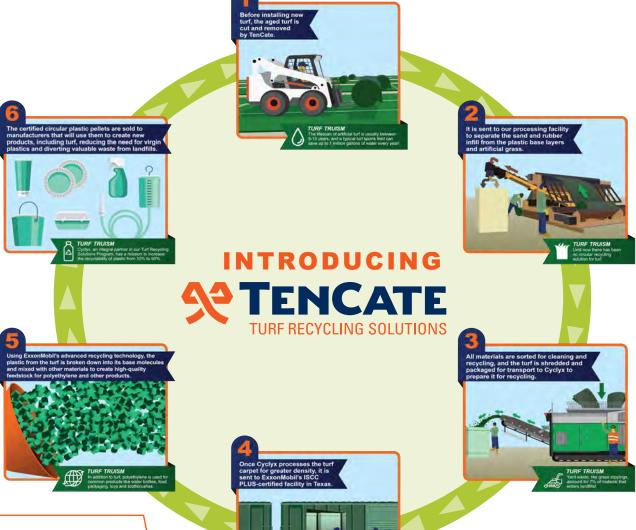
NO WASTE. NO LANDFILL. NO QUESTIONABLE DOWNCYCLING OR REPURPOSING.

TenCate offers the first truly circular solution for artificial grass.

- · Employ a first-of-its-kind zero-waste field solution
- · Divert thousands of square feet of materials from the landfill or incinerator
- Provide tons of material to the circular economy
- Ensure turf never contributes to a school or community's waste footprint

CHAIN OF CUSTODY

Each field is assigned a reference number which follows it throughout the entire processing cycle. The turf is initially processed at the TenCate Turf Recycling Solutions facility; once this processing is complete, a certificate is issued for the customer. The processed turf is then assigned a lot number and transported to the Advanced Recycling facility. Once the turf has gone through the advanced recycling process, confirmation is sent to TenCate Turf Recycling Solutions and shared with the customer.



PRICING

Turf processing: \$0.15/sq. ft.*

Calculate your field's cost at turfrecycling.us/calculator

If you have turf to be recycled or questions, email Ben Tidwell: b.tidwell@tencategrass.com

PART H REFERENCE LIST



REFERENCE

LIVS T

GEOSURFACES, INC. 7080 ST. GABRIEL AVENUE – SUITE A ST. GABRIEL, LA 70776











Texas A&M University Mondo Track

College Station, TX Craig Valka, valka@athletics.tamu.edu











Lafreniere Park Fields 7 and 8 FIFA Certified Soccer Fields

Metairie, LA Tripp Rabalais, trabalais@jeffparish.net











Live Oak High School Football Field and Mondo Track Surface

Denham Springs, LA
Jesse Cassard, jesse.cassard@lpsb.org











Episcopal High School FIH Certified Hockey Pitch

Bellaire, TX
Robert Buckelew, rbuckelew@ehshouston.org











Zachary High School Football Field

Zachary, LA Donald Simpson, Donald.Simpson@zacharyschools.org









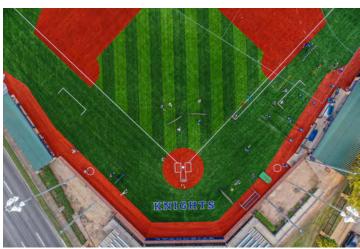


Southeastern Louisiana University Football Field

Hammond, LA Jay Artigues, jartigues@selu.edu











Episcopal High School Baseball Field

Bellaire, TX
Robert Buckelew, rbuckelew@ehshouston.org











University of Central Florida Baseball Foul Territory and Indoor Football

Orlando, FL
David Hansen, dhansen@athletics.ucf.edu



CLIENT LIST

Baylor University (TX) - Getterman Stadium Softball Field Glenn Moore - 254.709.3106

Louisiana State University (LA) - Alex Box Stadium, LSU Practice Baseball Field, Tiger Park Jill Smith - 225.266.2648

University of Louisiana Lafayette (LA) - Lamson Park Softball Field Scott Hebert - 337.247.4945

McNeese State University (LA) - Cowboy Diamond Baseball Field & Cowgirl Diamond Softball Field Justin Hill - 318.953.0802

Louisiana Christian University (LA) – Football Field & Billy Allgood Baseball Field Mike Byrnes - 318.664.6232

Nicholls State University - Manning Field @ Guidry Stadium, Ben Meyer Field @ Didier Stadium, Colonel SB Field Matt Roan - 540.818.4504

Marucci Sports (LA) – Marucci Elite Kurt Ainsworth - 225.892.7627

Baseball USA (TX) – Recreational Baseball Fields Chris Schultea - 713.703.2335

Southern Arkansas University (AR) – Rip Powell Football Field, Dawson Softball Field, Goodheart Baseball Field & Indoor Football Practice Field

Steve Browning - 501.912.2198

City of Broussard (LA) – Broussard Sports Complex BB & SB Fields, FIFA Certified Soccer Field Zach Leleux - 337.330.2649

City of Youngsville (LA) — Youngsville Sports Complex Baseball & Softball Fields
Tim Robichaux - 337.581.3028

City of Euless (TX) – The Parks at Texas Star Baseball Fields, Legends Baseball Field Ray McDonald - 817.685.1669

City of Grapevine (TX) – Oak Grove Park Baseball & Softball Fields Kevin Mitchell - 817.253.9327

City of Ruston (LA) – Ruston Sports Complex Baseball & Softball Fields Womack Construction/Chase Womack - 225.610.6880

Cypress Mounds Baseball Complex (LA) – Recreational Baseball Fields

Mack Chuilli - 225.610.6880

City of Zachary (LA) – Zachary Youth Park Baseball Fields & Indoor Batting Cage Facility

Shane Hebert - 225.268.9323

City of Sterlington (LA) – Sterlington Sports Complex Baseball & Softball Fields

Kerry Elee - 318.366.4166

City of Thibodaux (LA) - Peltier Park Baseball Field

Kevin Clement - 985.803.0142

Jackson Parish Recreation (LA) - Recreational Baseball Fields & Batting Cage Facility

Mike Simonelli - 318.533.3630

Lafourche Parish Recreation (LA) – Recreational Baseball Fields

Kirk Chaisson - 985.438.0663

Terrebonne Parish School Board (LA) – Terrebonne Parish Baseball Field

Becky Breaux - 985.855.1533

University High School (LA) – Football Stadium & Baseball Field

Andy Martin - 225.892.1682

Shiloh Christian School (AR) - Football Stadium, Baseball Field, Softball Field & Indoor Practice Field

Ben Mayes - 479.756.1140

Conway School District (AR) - Conway High School Football Field & Indoor Practice Facility

Clint Ashcraft - 501.450.4880

Parkview Baptist School (LA) – Eagle Football Field, Baseball Field & Softball Field

Darron Mitchell - 225.405.3753

Ouachita Parish School Board (LA) - West Monroe High School Rebel Football Stadium & Practice Field

Jerry Arledge - 318.509.9188

Calcasieu Parish School Board (LA) - Westlake High School Football Field, Baseball & Softball Complexes

John Richardson – 337.842.0436

St. James Parish School Board (LA) - Lutcher High School Baseball & Softball Field

Clay Slagle - 225.252.4826

St. James Parish School Board (LA) - St. James High School Baseball & Softball Field

Clay Slagle - 225.252.4826

Livingston Parish School Board (LA) - Live Oak High School Baseball, Softball & Football Field

Jesse Cassard – 225.810.7529

City of Crowley (LA) - Recreational Baseball & Softball Fields

Peter Kirsch - 337.253.932

ADDITIONAL CLIENTS

COLLEGES and UNIVERSITIES:

New England Patriots (MA) – Empower Fieldhouse

University of Central Florida (FL) – Nicholson Fieldhouse & Baseball/Softball Fields

University of Florida Gainsville (FL) - Mondo Track

Auburn University (AL) - Outdoor Training Fields

University of Alabama at Birminghamm - Mondo Track

Clemson University (SC) – Outdoor Training Fields

University of South Carolina (SC) – Indoor Track

Western Carolina University (NC) - Football/Soccer Stadium

University of North Carolina at Chapel Hill (NC) – Softball Indoor Training Center

Arkansas State University (AR) - Centennial Bank Stadium & Indoor Practice Facility

University of Arkansas Pine Bluff (AR) - Simmons Bank Field

Henderson State University (AR) - Carpenter-Haygood Stadium & Football Practice Field

Henderson State University (AR) - Baseball Field & Softball Field

Harding University (AR) - Sonic Field

University of Arkansas Fayetteville (AR) - Trackk

University of Central Arkansas (AR) – Estes Stadium Football Field

University of Central Arkansas (AR) – Baseball Field & Softball Field

University of Central Arkansas (AR) – Intramural Softball Fields

Lyon College (AR) – Indoor Practice Facility

Rhodes College (TN) - Baseball Field

Southern Nazarene University (OK) – Football/Soccer Field Southern Nazarene University (OK) – Indoor Training Center

Oklahoma Christian University (OK) – SNU Stadium Softball Field

Oklahoma Baptist University (OK) - Crain Family Stadium at the Hurt Complex Track

Pearl River Community College (MS) - Lion Stadium Football Field

Pearl River Community College (MS) - Baseball Field

Holmes Community College (MS) - Baseball Field & Softball Field

Southeastern Louisiana University (LA) – Strawberry Stadium Football Field

Southeastern Louisiana University (LA) - Lady Lions Softball Field & Pat Kenelly Diamond Baseball

Field University of Louisiana Monroe (LA) – Lady Warhawks Softball Field

University of Louisiana Monroe (LA) – University Recreation Complex

Louisiana State University Shreveport (LA) - Pilot Baseball Field

Louisiana Tech University (LA) - Baseball Field & Softball Field

Louisiana College (LA) - Football Field & Softball Field

ALABAMA – PARKS and SCHOOLS:

City of Birmingham Baseball Fields

ALASKA – PARKS and SCHOOLS:

Muldoon Area School Baseball Field

ARKANSAS – PARKS and SCHOOLS:

Ashdown High School Football Field

Bauxite High School Indoor Practice Facility

Bentonville High School Baseball, Softball & Football Field

Bentonville West High School Baseball & Softball Field

Blytheville High School Football/Soccer Field

Bryant High School Football/Soccer Field & Indoor Practice Facility

Cabot High School Baseball, Softball & Football Field

Cabot Parks & Recreation – Baseball & Softball Fields

Christ the King Outdoor Soccer Facility

City of Jonesboro – Baseball Fields

Conway Christian School Baseball Field

Conway High School Football Field

Cossatot River High School Track

Crossett Hgh School Football Field & Indoor Multi-Purpose Field

DeQueen High School Football Field

DeWitt High School Indoor Practice Field

Drew Central High School Baseball, Softball & Football Field

El Dorado Recreational Complex – Baseball & Softball Fields

Episcopal Collegiate High School Soccer Field

Greenbriar High School Indoor Practice Facility

Greenland High School Baseball, Softball & Football Field

Gurdon High School Football/Soccer Field & Turf Track

Hamburg High School Football/Soccer Field

Harmony Grove High School Football Field

Helena-West Helena High School Football Field & Practice Field

Hope High School Football/Soccer Field & Indoor Football Field

Jacksonville High School Indoor Facility

Jonesboro High School Indoor Practice Field

Lakeside High School Football Field

Lincoln High School Football Field

Mineral Springs High School Football/Soccer Field

Nashville High School Baseball Field

Newport High School Football Field

Northshore Business Soccer Complex Soccer Fields

Palestine-Wheatley High School Baseball, Softball & Football Field

Pea Ridge High School Football Field

Prairie Grove High School Softball Facility

Quitman High School Football Field

Searcy High School Track

Star City High School Football/Soccer Field & Indoor Practice Field

Stuttgart High School Football/Soccer Field

Sylvan Hills High School Indoor Practice Facility

Trumann High School Football Field

Van Buren High School Indoor Practice Facility

Warren High School Track

HAWAII – PARKS and SCHOOLS:

NFL Pro Bowl Drainage Pad

LOUISIANA – PARKS and SCHOOLS:

Airline High School Football Field

Archbishop Rummel High School Baseball Hitting Facility

Archbishop Rummel High School Multi-Purpose Field

Ascension Episcopal School Baseball Field

Beekman Charter High School Football Field

Breaux Bridge High School Football/Soccer Field

BREC - Central Park Baseball & Softball Fields

BREC - Howell Park Putting Greens

BREC - Oak Villa Sports Complex

Calcasieu Parish Ward 3 Recreation – Legion Field

Calvary Baptist High School Baseball Field

Camp Beauregard Multi-Purpose Field & Turf Running Track

Carrollton-Audubon Batture Park - Baseball Field

C.E. Byrd High School Baseball Field

Cecilia High School Football/Soccer Field & Baseball Field

Central High School Baseball, Softball & Football/Soccer Field

City of Abbeville Comeaux PPark Baseball & Softball Fields

City of Broussard Baseball Fields

City of Carencro - City Park Baseball Fields & Batting Cage Facility

City of Lafayette - Clark Field & Fabacher Field Batting Facility

D'Arbonne Woods Charter School Football Field

Denham Springs High School Baseball, Softball & Football Field

East Iberville High School Football Field

East Ouachita Parish Osterland Sports Complex – Baseball & Softball Fields

E. D. White High School Football Field & Trackk

Eunice Sports Complex Baseball Fields

Evangel Christian Academy Football Field

Farm Systems, LLC Baseball & Softball Fields

Geissler Project FIFA Soccer Field

Grace Christian Academy Playground

Grant High School Softball Field

Hammond America Park Baseball & Softball Fields

H. L.. Bourgeois High School Football Field

Holy Savior Menard High School Baseball Field

Iowa High School Baseball & Softball Fields

Jesuit High School – John Ryan Stadium

John Curtis Christian School Multi-Purpose Field & Softball Field

LA Pepper Plex – Baseball, Softball, & T-Ball Fields

Lafayette Christian Academy Football Field

Lafayette Renaissance Charter Academy Playground

Lafraniere Park FIFA Certified Soccer Fields

Lakeview High School Football Field

Larose Regional Park Civic Field

Lutcher High School Football, Baseball & Softball Fields

Mandeville High School Baseball Field

Mandeville's Pelican Park Baseball Fields

Mangham High School Lobrano Field

Many High School Baseball, Softball & Football/Soccer Field

Marucci Hitters House of Mandeville Batting Cages

Northlake Christian High School Wolverine Football Field

Northshore High School Baseball Field

Northwood High School Football Field

Oak Grove High School Football Field & Turf Walking Track

Parkview Baptist School Football, Softball & Baseball Fields

Parkway High School Football Field

Plaquemine High School Baseball & Softball Complex and Football/Soccer Field

Premier Soccer Indoor Soccer Field

Rayville High School Football Field

Regala Park Recreational Baseball Fields

Sam Houston High School Football/Soccer Field

Scott Park Recreational Baseball & Softball Fields

South Beauregard Recreation Baseball Fields

St. Charles Catholic High School Baseball Field

St. Martinville High School Football Field

St. Pius Elementary School Multi-Purpose Field

St. Thomas Aguinas High School Baseball & Softball Field

St. Thomas More High School Softball & Football/Soccer Field

Sterlington High School Indoor Training Facility

Terrebonne General Medical Center Turf Running Track

Teurlings Catholic High School Baseball Field

Teurlings Catholic High School Rebel Stadium Football/Soccer Field & Turf Track

The Dunham School Indoor Training Facility

Tioga High School Softball Field

Total Package Sports Training Center

Traction CSE Baseball & Softball Fields

Wally Pontiff Jr. Foundation Baseball Field

Ward 10 Recreation Baseball, Softball & T-Ball Fields

Washington Marion High School Football Field

West Baton Rouge Parish Parks Baseball & Softball Fields

West Feliciana Parish School Board Baseball & Softball Field

West Ouachita High School Football/Soccer Field

Westlake High School Baseball Field

White Castle High School Football Field

Zachary High School Football Field

TEXAS – PARKS and SCHOOLS:

Athlete Training + Health - Allen - Soccer Field & Indoor Training Facility

Athlete Training + Health - Houston - Indoor/Multi-Purpose Field

Athlete Training + Health - Katy - Soccer Field & Indoor Training Facility Athlete

Training + Health - Pearland - Memorial Hermann Sport Park

Athlete Training + Health - Spring - Indoor Training Facility

Bakersfield Park - Baseball Field

Bicentennial Park - Baseball Field & Playground

Cotton Sports Ranch - Multi-Purpose Field & Baseball Field

Episcopal High School - Baseball Complex

Episcopal High School FIH Certified Field Hockey Field

Hooks Independent School District Athletic Facilities

Oak Grove Park Baseball Fields

St. Paul II Catholic High School Football Field

The Parks at Texas Star Softball Fields

OKLAHOMA – PARKS and SCHOOLS:

Pawhuska High School Football/Soccer Field

OHIO – PARKS and SCHOOLS:

Bishop Hartley High School Football Field Cardinal High School Football Field

MISSISSIPPI – PARKS and SCHOOLS:

Central Hinds Academy Baseball Field Rankin Trails Park – Baseball & Softball Fields

TENNESSEE – PARKS and SCHOOLS:

Crockett Park Baseball Field

MISSOURI – PARKS and SCHOOLS:

Hayti School District Football Field