WHAT'S UNDER YOUR TURF?

ArmaSport

It should be ArmaSport® Turf Underlayment Shock Pad

ArmaSport is the ideal shock pad for exceptional sports field performance and consistent playing conditions.

// Our fast-responding technical experts will help you navigate our vast product line for any application or develop innovative solutions to meet market requirements.

www.armacell.us

armacell®
ArmaComp™

WHAT'S UNDER YOUR TURF?

ArmaSport

For safety and performance, your synthetic field's success starts UNDER the turf.

ArmaSport® turf underlayment pad stabilizes and cushions the playing surface providing consistent shock attenuation across the field. Its optional drainage system and elastomeric material construction ensure greater field performance, durability and longevity. The ArmaSport pad system is the ideal, safer choice with or without granular infill systems.

// Provides consistent shock attenuation
// 100% protection, 100% of the time
// Unlike infill, no loss or migration of the cushioning material
// Turf-carpet widths make installation fast
// Made in USA

Field Hockey

Football

Soccer

100% Protected from Goal to Goal

ArmaSport turf underlayment shock pad is a superior turf pad for exceptional sports field performance and consistent playing conditions. Continuous shock pad installations like ArmaSport TU2 meet the G-MAX standard and provide consistent shock attenuation across 100% of the field, 100% of the time. There's no movement of the cushioning material to edges, and no direct contact with players.

Safer and More Durable
// Using an ArmaSport pad under turf fields ensures more consistent shock attenuation across the field than other non-pad systems.
// Tested to FIFA 2 Star test methods
// Tested to ASTM F355 test methods

Innovative Drainage Options
// Perforation for water drainage available
// Ridge pattern available for enhanced drainage

Synthetic Turf Applications
// Field Hockey, Football, Soccer, Lacrosse
// Multi-purpose
// Indoor multi-use, practice fields
// Indoor portable systems

Variety of Options
// Closed cell rubber foams in two densities and firmnesses to meet strictest specifications. Additional firmnesses and custom thicknesses available upon request
// Currently used in turf underlayment / field padding applications worldwide

Environmentally Friendly
// An Armacell PVC / NBR elastomeric pad system adds durability and longevity to a field
// Armacell turf underlayment materials are low phthalate products and meet the phthalate threshold requirements (<0.1%) of the CPSIA / CPSC Improvement Act of 2008 public law 110-114
// Does not contain lead, cadmium, mercury or formaldehyde, and meets the global REACH and RoHS requirements covering prohibited substances
// Manufactured with antimicrobial protection against fungi, mold and bacteria

Sizes
// Width: 60" typical
// Thickness: Typical application thicknesses: 3/8" (9.5 mm) or 5/8" (15 mm)
// Length 3/8" x 200-' length and 5/8" x 180' length rolls.

TECHNICAL DATA SUMMARY

Armacell manufactures closed cell elastomeric foam that is currently used in turf underlayment / sports field shock pad applications. Following is physical property information for padding materials including shock absorption (G-max) and water infiltration / impermeability.

Quick Physical Property Guide

ArmaSport	Density (lb/ft^3)	Density (kg/m^3)	25% Compression Deflection (psi)	25% Compression Deflection (kPa)	Polymer	Color
TU2	6.5 - 8.5	104 - 136	6 - 9	41.4 - 62.1	PVC / NBR	Black

Water Infiltration / Drainage

- **Test Method:** British Standard (BS) 7044 Method 4
- **Title:** Determination of infiltration rate-buffered ponding-type infiltrometer
- **Standard Turf Description** = 42 oz. (2.25" Pile Height) Monofilament Synthetic Turf
- **Infill:** 3.3 lbs / ft^2 Rubber mixed with 3.0 lbs / ft^2 Sand

Armacell ArmaSport® Turf Underlayment Pad

TU2	TU2	TU2	NO PAD
Pad Description: **5/8" flat pad no ridges and not perforated**	Pad Description: **5/8" perforated, flat pad**	Pad Description: **5/8" ridges and perforated pad Note: Pad was tested with ridge side down**	
Inches / hour = 3	Inches / hour = 25	Inches / hour = 31	Inches / hour = 52
Centimeters / hour = 7	Centimeters / hour = 64	Centimeters / hour = 79	Centimeters / hour = 132

Note: Drainage was lateral between the turf and pad

Shock Absorption: G-Max

Testing Procedures: Testing was conducted according to ASTM F1936 (2015). The testing climate was 23˚C, 45% relative humidity. Point locations are documented in test report (available upon request).

System 1

A field hockey type turf with a nominal pile height of 1/2". No infill was used for this system.

	2nd / 3rd Impact Average
3/8" Foam	135
1/2" Foam	114
5/8" Foam	105

System 2

An infilled system with pile length of nominally 1.75". Infill / sand was provided by Armacell. Infill was placed to a nominal depth of 1.25", leaving approximately 0.5" of the piles exposed.

	2nd / 3rd Impact Average
3/8" Foam	95
1/2" Foam	84
5/8" Foam	70

System 3

An infilled system with pile length of nominally 2.0". Infill / sand was provided by Armacell. Infill was placed to a nominal depth of 1.5", leaving approximately 0.5" of the piles exposed.

	2nd / 3rd Impact Average
3/8" Foam	101
1/2" Foam	102
5/8" Foam	93

PHYSICAL PROPERTIES GUIDE CHART

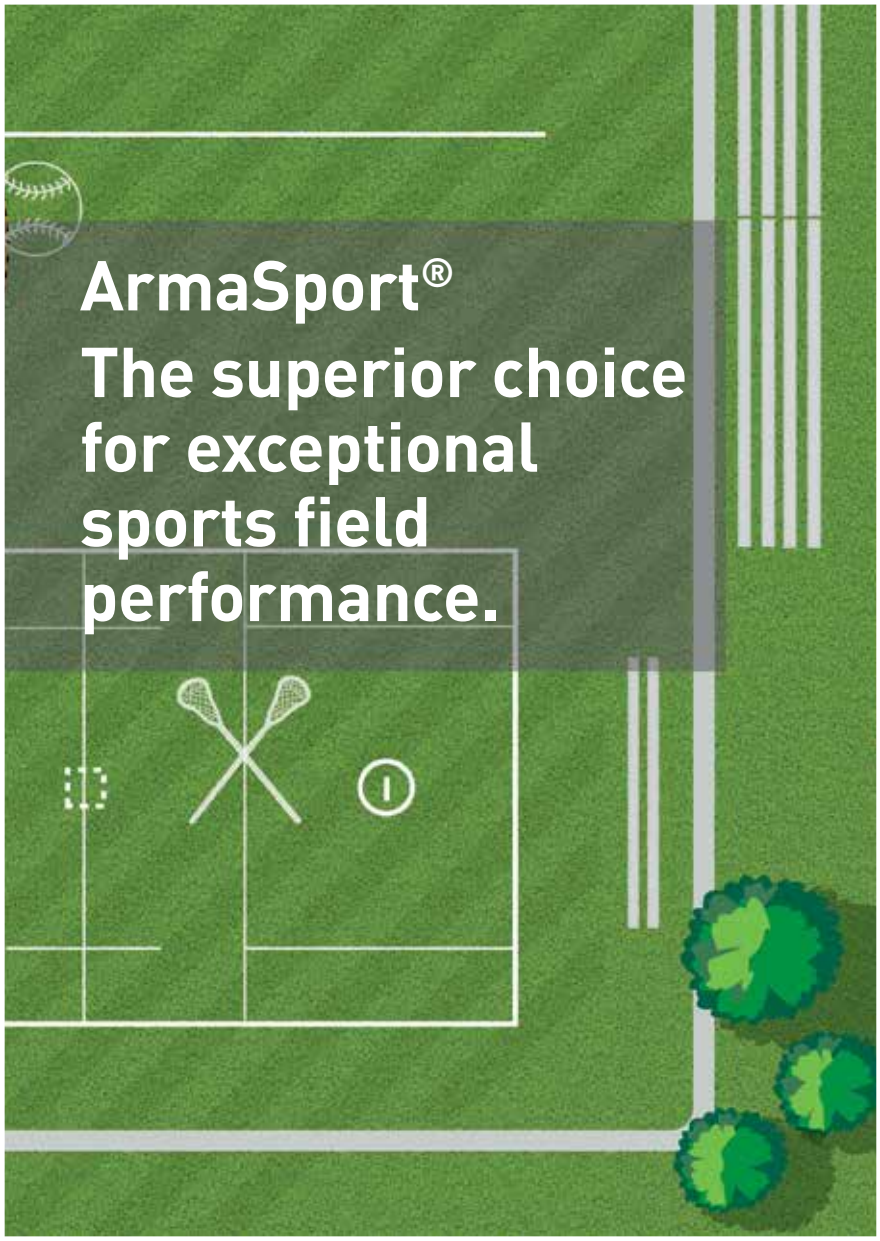
Physical Property	ArmaSport TU2
Polymer	PVC / NBR*
Color	Black
Form	Rolls (Sheets Available)
Ridges	Available with and without
Perforation	Available with and without
ASTM D 1056 Designation	2A2 / 2C2 / 2B2
Compression Deflection, 25% (psi) per ASTM D 1056	6 - 9 psi (41.4 - 62.1 kPa)
Density per ASTM D 1056, lb / ft^3	6.5 - 8.5 lb / ft^3 (104 - 136 kg / m^3)
Compression set, 50% compression, 22 h @ room temperature, 24 h recovery, % of original deflection per ASTM D 1056	30% max
Water Absorption by wt. % per ASTM D 1056	≤5%
Tensile Strength per ASTM D 412 Die A, psi (kPa)	80 psi min (551 kPa min)
Elongation per ASTM D 412 Die A, %	80% min
Tear Strength per ASTM D 624 Die C, lb/in	10 lb / in min (1.75 kN / m min)

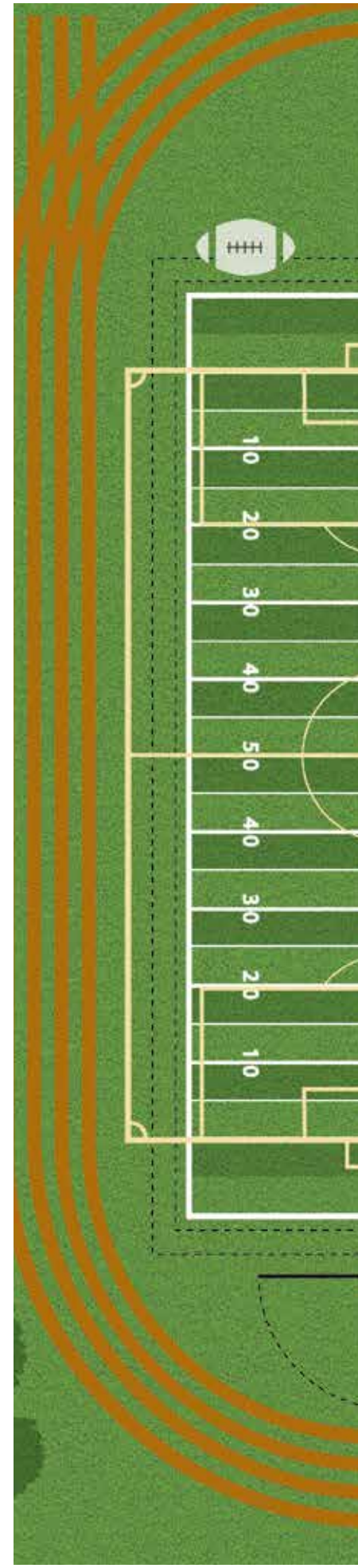
* TU2 is 100% virgin material and does not contain recycled tire material.

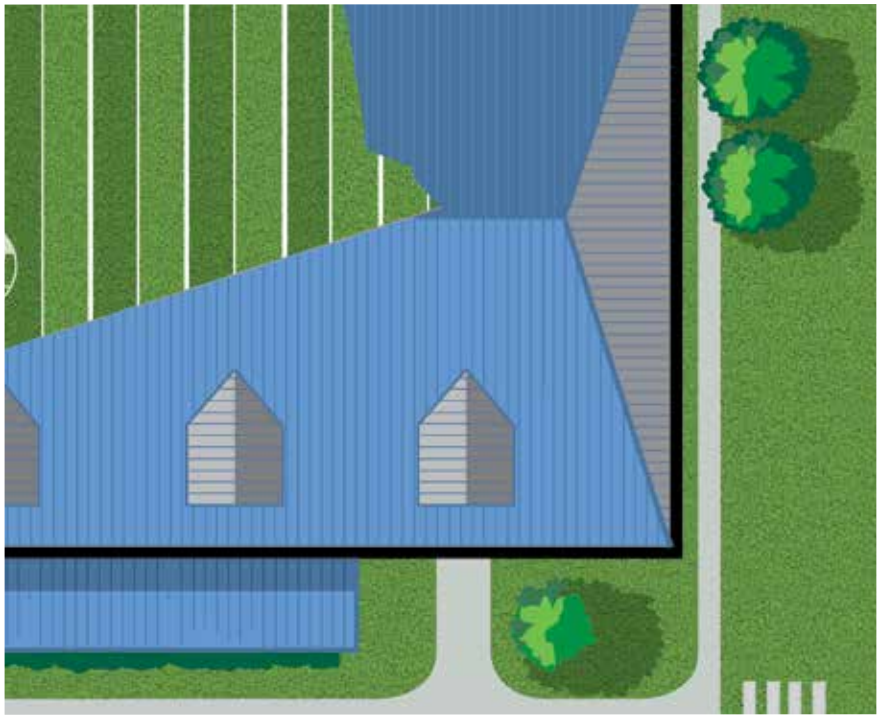
All Armacell ArmaSport Pads

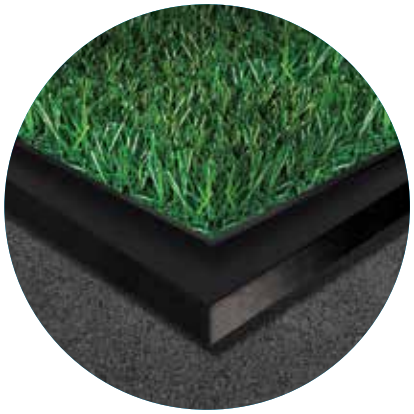
Water Infiltration Rate per BS 7044 Method 4 (in / hour) and (cm / hour)	5/8" flat pad (no ridges or perforation) under standard turf and infill:	3" (7 cm) / hour
	5/8" flat perforated pad under standard turf and infill:	25" (64 cm) / hour
	5/8" ridged and perforated pad under standard turf and infill:	31" (79 cm) / hour
	No pad under standard turf and infill:	52" (132 cm) / hour
Fungus Resistance per ASTM G 21	Rating 0 Specimen remained free of fungal growth	Rating 0 Specimen remained free of fungal growth
Ozone Resistance per ASTM D 1171	Rating 0 No Cracking	Rating 0 No Cracking

ArmaSport®
The superior choice for exceptional sports field performance.

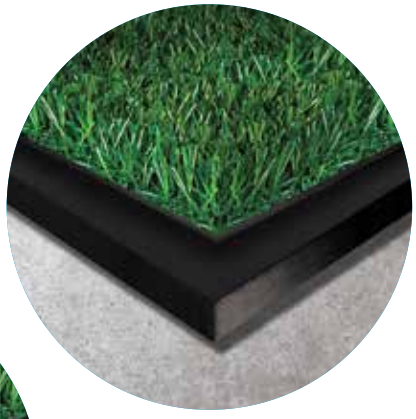


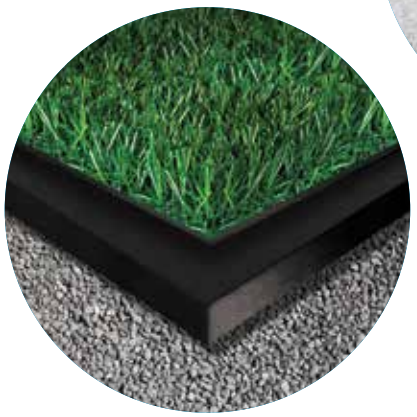






ArmaSport Turf Underlayment shock pad can be used over a wide range of existing substrates, including asphalt, concrete or crushed rock.





Turf Underlayment Projects

Field Hockey
Duke University
Stanford University
University of Iowa
University of Louisville
University of Maryland
University of Richmond
University of Virginia
Wake Forest University – Kentner Stadium
Ball State University
Brown University
College of William and Mary
Columbia University
Ohio State University
University of Louisville
USA Field Hockey National Training Center Virginia Beach
Arena Football
KC Command
Orlando Predators
Pittsburgh Power
Indoor
Dakota Dome – University of South Dakota
Spooky Nook Soccer Facility
Multipurpose / Multi-Sport
Dartmouth College
Howard University Football / Soccer
Indoor Athletics – ICE Training Center (Dallas, TX)
Miscellaneous Projects
Amway Center Lacrosse Field (Orlando) Lacrosse
Astro Corporation Baseball
Brown University Batting Cages
City of Rochester MISL
University of Georgia Track
University of Louisville Drill Hill

* See ArmaSport Project List for additional fields

ArmaSport | Turf Brochure | 062022 | NA | EN-A | 5390

ABOUT ARMACELL

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With 3,200 employees and 24 production plants in 16 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

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