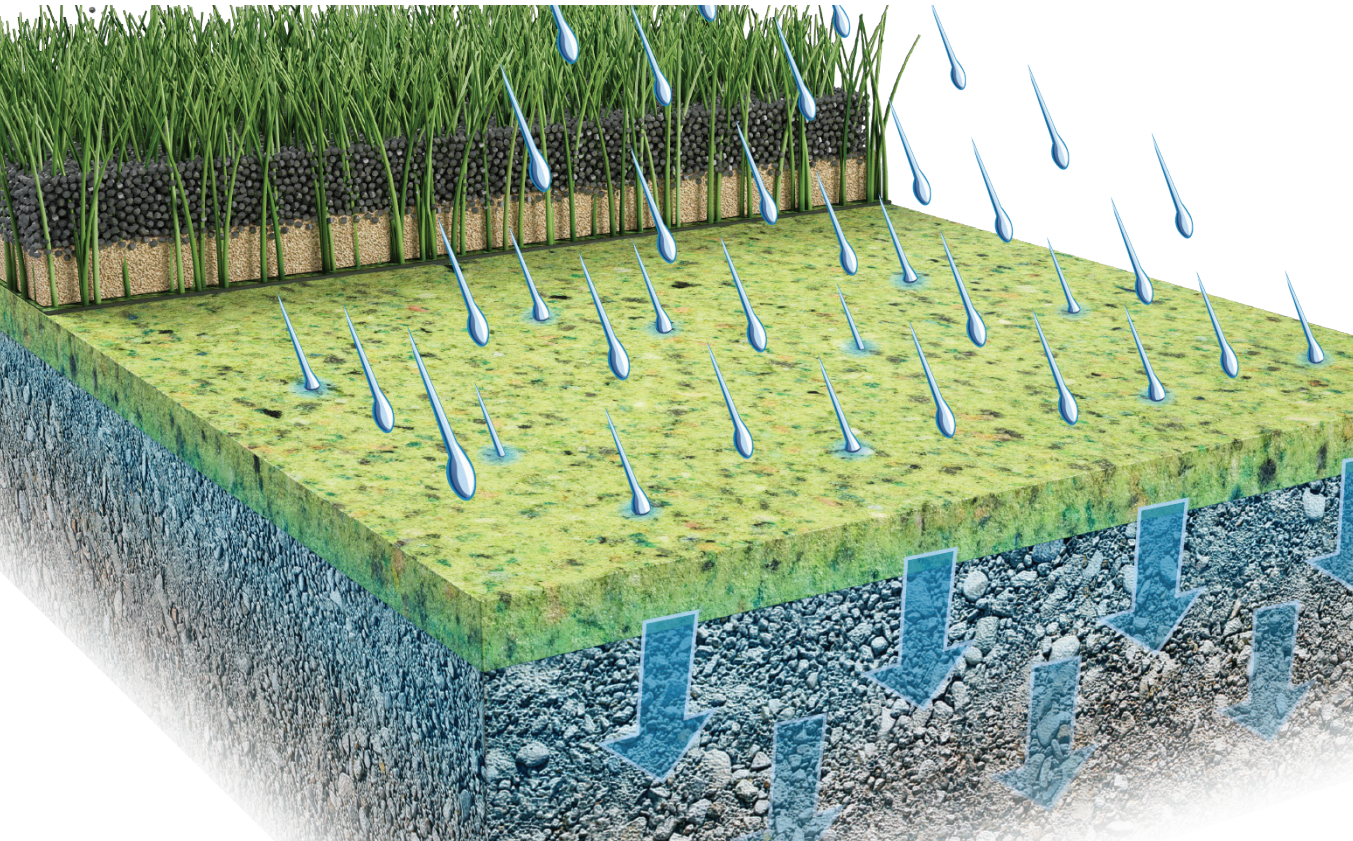


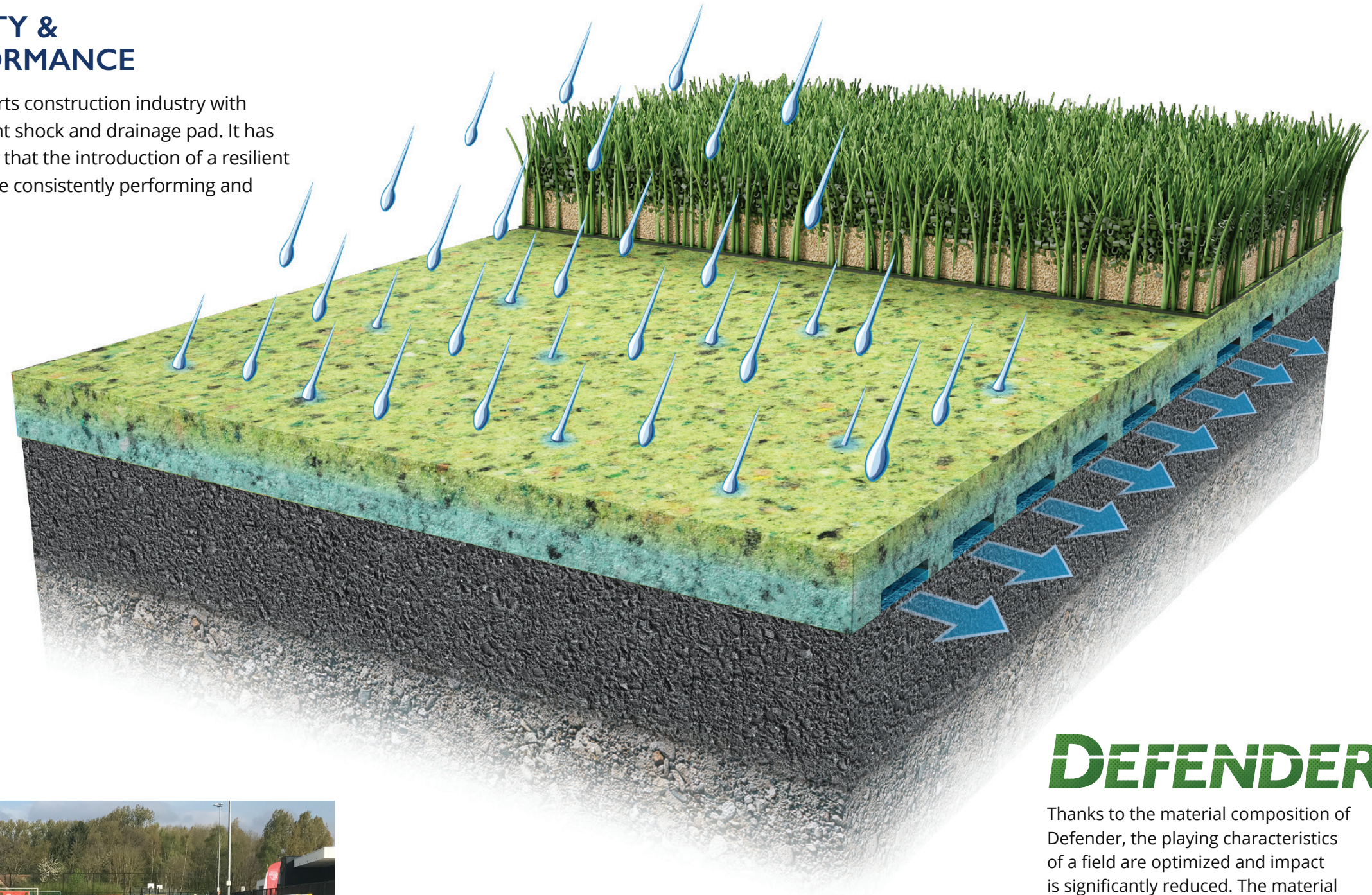
 **DEFENDER**<sup>TM</sup>  
NEXT GENERATION SHOCK & DRAINAGE PAD



## A LIFETIME OF SPORTS SAFETY & EFFECTIVE DRAINAGE PERFORMANCE

SportsEdge sets new standards in the sports construction industry with **Defender™**, the professional underlayment shock and drainage pad. It has become common knowledge and practice that the introduction of a resilient layer beneath synthetic turf creates a more consistently performing and safer sports surface.

To meet exacting international sports safety standards, Defender uses the open and flexible cell structure of polyurethane technology to minimize the risk of player injury while helping simulate the characteristics of the best natural turf playing surfaces. Defender will not lose its elasticity over time like conventional polyethylene and polypropylene materials. The homogeneous material composition guarantees long-lasting product performance and low maintenance even under extreme weather conditions.



## DEFENDER™

Thanks to the material composition of Defender, the playing characteristics of a field are optimized and impact is significantly reduced. The material also provides excellent drainage and is suitable to any climate. And its high water retention capacity provides the potential for evaporative cooling effects on synthetic turf fields.

## DEFENDER VALUE PROPOSITION

### FEATURES, PROPERTIES & DISTINCTIVE CHARACTERISTICS

- Polyurethane Composition with Open Cell Structure, Elastic Cell Walls, High Density & Homogeneous Matrix
- Vertical & Optional Horizontal Drainage
- Dimensional Stability, 2.1 Meter Wide Rolls
- Post-Industrial Waste, Recycled Raw Materials, No Heavy Metals

### COMPETITIVE ADVANTAGE

- Resilience
- Compression Set Resistance
- Consistent Performance
- Consistent Material Thickness
- Shock Absorption
- Water Retention
- Excellent, Efficient Drainage
- Stays Put!
- Easy Handling
- Fast & Simple Installation
- Green Practices
- Odorless
- Inert Material

### CUSTOMER BENEFITS

- Long-lasting Performance, No Reduction
- Unaffected by Extremes of Weather & Temperature
- Trouble-free for up to three turf cycles
- Minimize Soft & Hard Spots Caused by Infill Migration
- Injury Reduction, Flexible Infill Choices
- Potential Cooling Effects
- All-Weather Performance, Extended Playing Season
- Facilitates Vertical to Horizontal Drainage
- Smooth Top Surface Without Any Buckling
- Weather Independent Installation (Wind, Rain, Heat, Cold)
- Time & Cost Savings, Loose Laid, Minimal Taping, No Movement
- Environmentally Sustainable, Recyclable
- Indoor Applications
- Do No Harm

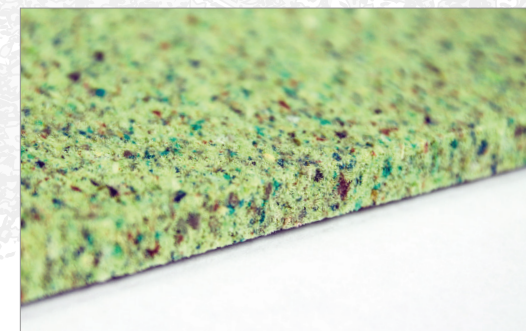
## DEFENDER STAYS PUT!

The installation of Defender is much easier and quicker than polyethylene rolls, panel systems or in-situ applied e-layers. Due to its high density, Defender rolls out flat and lies firmly on the subbase creating a smooth, homogeneous and even layer. No slices or joints are needed to compensate for expansion or contraction during installation because Defender is the most dimensionally stable shock pad on the market. This greatly reduces the risk of stresses on the turf layer due to differential thermal expansion.

Delivered in rolls that go down in minutes, Defender can be installed in one day on a typical field and under any weather conditions. Sun, wind or rain won't impact its behavior during installation. Rolls are

simply cut to length and laid out ahead of the turf with no concern that the pad will move while exposed. No taping is required with Defender.12, saving time and expense. Defender.14C requires only minimal taping at end joints in order to keep the drainage channels aligned. The dimensional stability of Defender means that this pad stays where you put it!

**DEFENDER**<sup>TM</sup>  
NEXT GENERATION SHOCK & DRAINAGE PAD

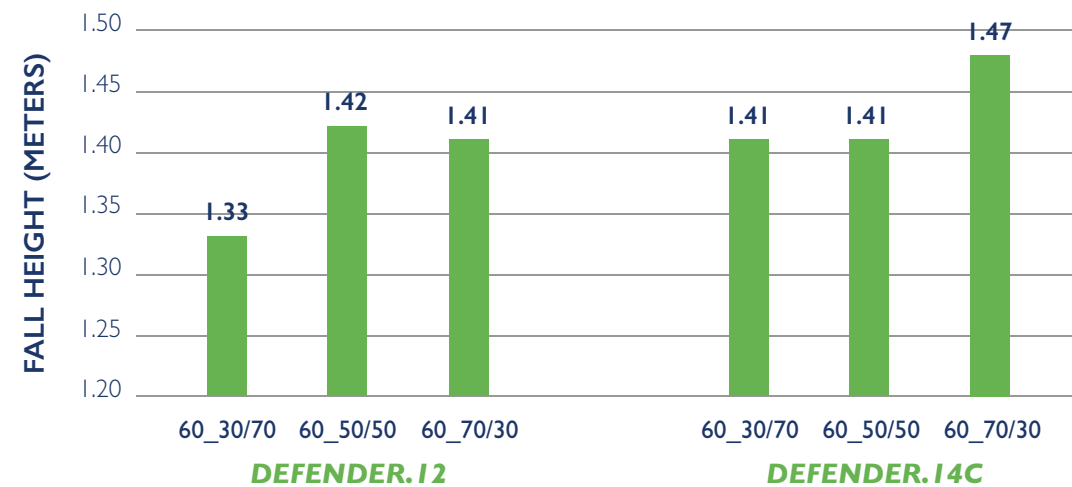


## THE BEATING HEART OF DEFENDER

The open cell structure of our polyurethane foam is the beating heart of the product. Its unique structure allows rapid vertical drainage. Its water retention capabilities provide cooling benefits without risking damage from freeze-thaw cycles. Unsurpassed compression set resistance means that features that are present in the product at installation will be there for a lifetime. Dozens of installations in harsh climates are testament to the durability and reliability of Defender.



DEFENDER CRITICAL FALL HEIGHT



**KEY**  
 60 = turf height (mm)  
 30/70 = 30% rubber, 70% sand infill  
 50/50 = 50% rubber, 50% sand infill  
 70/30 = 70% rubber, 30% sand infill

## TWO MODELS FOR PERFECTLY TUNED FIELDS

SportsEdge offer two versions of Defender, the .12 and the .14C. **At 12 and 14 mm, don't let the thin cross sections fool you...It's not about thickness, it's about performance.** These pads pack a lot of technology into a small package! While made from recycled and re-bonded polyurethane foam scraps, the manufacturing process produces a consistent and homogenous product, not a mix of random density particles. This foam is purpose-built to be an efficient and affordable shock pad underlayment. Both models have been extensively tested and meet or exceed all requirements for sports performance and permeability.

**Defender.12** is a vertically draining pad that performs well with a wide range of popular synthetic turf and infill products. At a density of 15 lbs/ft<sup>3</sup>, it achieves excellent results in the categories of shock absorption percentage, Gmax, HIC/ Critical fall height, vertical deformation and energy restitution.

**Defender.14C** has all of the sports performance characteristics of the 12, but it provides drainage capacity in both vertical AND horizontal directions. When field design calls for vertical-to-horizontal drainage, .14C is the right choice. And paired with SportsEdge Terminator, 100% rainfall capture can be achieved. Defender.14C becomes part of the designer's stormwater management plan.

## DEFENDER™ TECHNICAL SPECIFICATIONS

	12	14
THICKNESS (mm)	12	14
DENSITY (lbs/ft <sup>3</sup> )	14.98	14.98
PERMEABILITY (in/hr)	177	308
LATERAL FLOW (gal/min/ft @ 0.5% slope)	1.07	68.7
WATER STORAGE CAPACITY (gal/ft <sup>2</sup> )	0.27	0.25
TENSILE STRENGTH (lbs/in <sup>2</sup> )	41.2	42.2
TENSILE ELONGATION (% min)	70.8	52.5
LINEAR THERMAL EXPANSION (in/ft/°C)	0.00185	0.00185
DIMENSIONAL STABILITY (%)	>99	>99
COVERAGE per ROLL (ft <sup>2</sup> )	475	565

DEFENDER.12 DEFENDER.14C

Go to [www.sportsedge.com](http://www.sportsedge.com) for further details, specifications, drawings and test results.

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7/06/2020