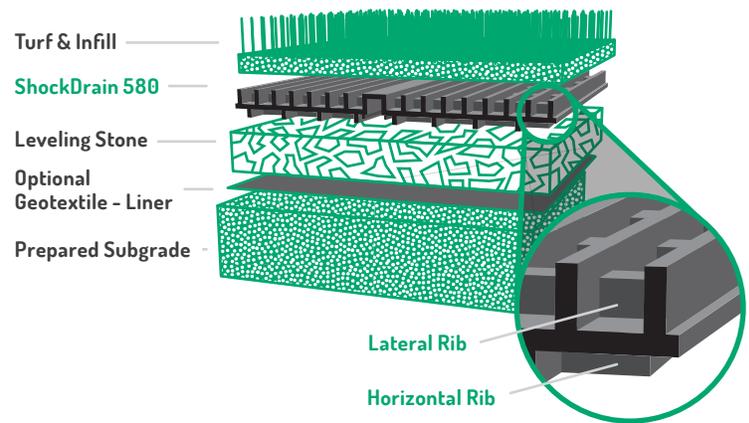


## ShockDrain 580

**ShockDrain™** is an engineered pad manufactured in the U.S. using Thermoplastic Elastomers Polyolefin Composites (TEPC). The pad itself is 100% recyclable from one cradle to another and meets the most stringent regulatory requirements.

**ShockDrain 580** is a shock attenuation and synthetic aggregate technology designed for the use beneath synthetic turf to achieve optimum athlete performance. The pad is unique and is also used in “new generation” Sports Fields for field foundations and water conservation.



## Product Overview

- 1. Honeycomb structure** for exceptional sub-surface stability which allows construction traffic directly on top of the pad during installation.
- 2. Expansion and contraction joints** to absorb any pad movement under varying heat cycles.
- 3. Pre-applied pressure sensitive adhesive** to secure lateral panel junctions.
- 4. Patented cooling chambers** on the surface place that help lowering field surface temperature.
- 5. Inlaid panel junctions** to ensure transparent seams (no lines visible in the turf).
- 6. Flex control ridges** to minimize turf abrasion and wrinkle during infill operations.
- 7. Horizontal ridges** designed to improve interface friction between turf and pad.

## Benefits of ShockDrain 580

- **High Transmissivity**
- **No Volatile Organic Compound (VOC) Release**
- **Excellent Impact Attenuation & Force Reduction**
- **Moisture Barrier** or Drain-Through Profile
- **Quick Installation**
- **Recyclable** and derived from recycled material
- **Standard Field Requires Only 2 Trucks** (90k Sq. ft.)
- **Made In the USA:** Meets Buy-America Requirements



**GMAX**  
AVG 90

## Why ShockDrain 580?



### Shock Absorption

ShockDrain 580 is industry-leading in shock attenuation which reduces impact and fosters a safer playing environment for athletes.



### Drainage

ShockDrain 580 is at the forefront of drainage technology, allowing maximum permeability.



### Economic Benefits

Our solution is one of the most cost-effective on the market. Don't believe us? Get in touch to learn more.

### Hydraulic Properties

Transmissivity gpm/ft (m <sup>2</sup> /sec)	120
Infiltration Rate (Perforated) in/hr	140

### Shock-Absorbing Properties

Impact Attenuation (Gmax)	90
HIC	1.3

### Chemical Properties

Polycyclic Aromatic Hydrocarbon	No Detectable Level
Common Metals	No Dispersion Above Limit

### Material Properties

Composition (composite)	Thermoset Elastomer, Polyolefin
Composite Ballast lbs./ft <sup>2</sup> (kg/m <sup>2</sup> )	0.94 (4.6)
Nominal Thickness mils (mm)	580 (15)
Core Thickness mils (mm)	99 (2.5)
Thermal and Humid Aging (%)	<1%
Coefficient of Linear	0.003
Thermal Expansion (in/ft)	

## About En-Plast

En-Plast is a Houston, Texas based technology business that manufactures engineered pads which utilize post-consumer recycled material and other plastics for a variety of in-ground and above ground applications.

Our products are unique and used for innovative purposes including, but not limited to: impact absorption, water conservation, noise pollution, reinforcement, and foundations. En-Plast sources raw materials that are under-utilized or wasted, exemplifying our mission to deliver products that are environmentally friendly. Our facility is strategically located to ensure the quick distribution and installation of our products through direct sale and strategic partnerships.

Our team has a storied history in the synthetics industry, with over 60 years combined experienced amongst our executive team.

## SPECIFICATION SHEET <sup>1</sup>

ShockDrain 580 is a shock attenuation and synthetic aggregate technology designed for the use beneath synthetic turf designed to achieve optimum advanced artificial athlete performance. Additionally, the technology delivers high fluid and air transmissivity and low thermal gradient between sub-grade and turf.

Material Properties	Unit	Values <sup>1</sup>
Composition	Composite	Thermoset Elastomer, Polyolefin Composite
Composite Ballast <sup>2</sup>	lbs/ft <sup>2</sup> (kg/m <sup>2</sup> )	0.94 (4.6)
Nominal Thickness	mils (mm)	580 (15)
Core Thickness	mils (mm)	99 (2.5)
Thermal and Humid Aging <sup>3</sup>	%	<1%
Water Absorption <sup>4</sup>	lbs/ft <sup>2</sup> (kg/m <sup>2</sup> )	0.02 (<0.06)
Tensile Strength <sup>5</sup>	lbs/ft	1200 (MD) 1200 (TD)
Elongation at Break <sup>5</sup>	%	(MD) 120 (TD) 120
Compression Set <sup>6</sup>	lbs/sf	1,000 5,000 10,000
	% (min)	(100%) (95%) (70%)
Coefficient of Linear Thermal Expansion <sup>13</sup>	in/ft	0.003

Hydraulic Properties	Unit	Values <sup>1</sup>
Transmissivity <sup>7</sup>	gpm/ft(m <sup>2</sup> /sec)	120
Infiltration Rate (Perforated) <sup>8</sup>	in/hr	140

Shock Absorbing Properties	Values <sup>1</sup>	Chemical Properties	Values <sup>1</sup>
Impact Attenuation (Gmax <sup>9</sup> )	90	Polycyclic Aromatic Hydrocarbon <sup>11</sup>	No Detectable Level
HIC <sup>9</sup>	1.3	Common Metals <sup>12</sup>	No Dispersion Above Limit
Advance Artificial Athletes <sup>10</sup>	Upon Request		

### Dimensions and Delivery

The product shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring from 4 ft. in width by 206 ft. in length. The typical truckload quantity is 60 rolls. Custom roll lengths available upon request.

<sup>1</sup> Unless indicated otherwise, values shown are typical values. Brief descriptions of test procedures are given in the following notes.

<sup>2</sup> Unit weight of the composite ballast as a measure to stabilize product during installation and resist wind movement.

<sup>3</sup> Response to thermal and humid aging tested in accordance with ASTM D2126-09.

<sup>4</sup> Water absorption tested in accordance with ASTM D3575-08, time of immersion 48 hours.

<sup>5</sup> Tensile strength determined in accordance with ASTM D4595 Modified using test specimens of 100mm (4 in) x 200mm (8 in) strips, initial grip separation of 100mm (4 in), and elongation at break calculated by grip separation.

<sup>6</sup> Enplast modified ASTM D3575 Compression set (15 min load set read at transducer).

<sup>7</sup> Transmissivity determined in accordance with ASTM D4716, under 5.8 kpa (120 psf) and hydraulic gradient 1%.

<sup>8</sup> Infiltration rate EN 12616:2013 method A.

<sup>9</sup> Shock absorbing Gmax and HIC tested in an infilled synthetic turf field in accordance with ASTM F1936. HIC varies based upon turf pile height and infill type and ratios.

<sup>10</sup> Advanced Artificial Athletes tested in an infilled synthetic turf field in accordance with STC Advanced Artificial Athlete Protocol. Result varies based upon turf pile height and infill type.

<sup>11</sup> EPA 8270C SIM PAHs (Solid) tested by Eurofins Calscience test number En-plast 16-01-1335.

<sup>12</sup> EPA 6010B-EPA 7471A tested by Curtis & Tompkins test number En-plast 272962.

<sup>13</sup> ASTM D696 mod.