

# 810 Series: Custom Die-Cut Program

## Flexibility and Freedom of Design

The 810 Series offers you design freedom and flexibility encompassed with XRD® Technology — the best lightweight, wearable impact protection material.

Utilize the 810 Die-Cut Program to quickly move your custom impact protection design from initial concept to final production. Look beyond the basic pad designs, and take advantage of the XRD 810 Series' unique shapes and design capabilities that can help to build an interesting story around your next body protection, sporting goods or electronic case design.

### Concept design to final product in three easy steps

#### 1. Select the 810 Geometric Pattern

##### 810 Hex

- Popular hex pattern offers great coverage while being flexible and comfortable.
- Suggested Use: General use for upper and lower body padding and equipment.

##### 810 Mini Hex

- Lower profile and smaller hex pattern provides additional mobility and comfort while maintaining good coverage.
- Suggested Use: Protective padding for elbows, knees and knuckles.

##### 810 Cones

- Dual action protection system designed to adapt to different levels of impact. While the unique cone shape dissipates the impact, XRD Technology also works to absorb the impact.
- Suggested Use: High impact protection for helmets, thigh, shoulders, etc.

##### 810 Delta

- Designed to minimize weight and thickness, while maintaining excellent impact protection abilities.
- Suggested Use: Protective padding for tight design spaces such as ankles, ribs and forearms.

##### 810 Tear Drop

- Maximum impact protection coverage and flexibility made possible with unique, smooth flowing tessellation, that minimizes zones of exposure.
- Suggested Use: Full coverage protection for lower and upper body.

#### 2. Define Your Shapes

- Developing new designs is quick and easy. Simply outline your desired shape within the 810 Series pattern, then cut the design to trial and test.
- Pricing, samples and manufacturing is handled directly between you and your Rogers Representative.

#### 3. Construct Your Product

- Custom shapes can be inserted into your product by adhesion, welding or pocket.

## Standard 810 Die-Cut Shapes

Pre-designed XRD Extreme Impact Protection Shapes are available for your immediate use.

### 810 Hex Chevron

Layer the chevron in your desired combination to form custom designs for hip, rib, chest or other apparel and equipment

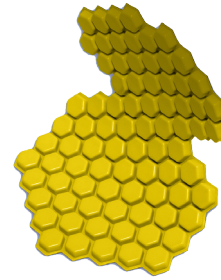


Approximate Dimensions:

10 in x 8 in x 0.280 in (254 mm x 203 mm x 7.1 mm)

### 810 Hex Figure 8

Flexible yet durable for shoulder, elbow and knee applications



Approximate Dimensions:

7.75 in x 5.25 in x 0.280 in (196.9 mm x 133.4 mm x 7.1 mm)

## 810 Series — PRELIMINARY Physical Properties

PROPERTY	TEST METHOD	XRDMA	
*DENSITY, lb / ft <sup>3</sup> (kg / m <sup>3</sup> )		12 (192)	20 (320)
Specific Gravity		0.21	0.35
Tolerance, lb / ft <sup>3</sup>		10.7-15.6	17.8-26.2
*COMPRESSION SET, % max.	ASTM D 3574 Test D @ 158°F (70°C)	< 10	
ANTIMICROBIAL PROTECTION	AATCC TM90	PASS	
	JIS Z 2801		
	AATCC TM30(iii)		
HARDNESS, Durometer, Asker C	Based on ASTM D 2240-05	15-40	50-75
STANDARD MATERIAL COLOR		VIVID YELLOW (65)	VIVID YELLOW (65)
STANDARD FABRIC COLOR		GRAY	BLACK

1. All metric conversions are approximate. 2. Additional technical services are available. 3. Information listed based on typical physical properties. 4. \* Standard testing property; Certificate of Compliance available per lot.

810 Hex	PRODUCT DIMENSIONS (LENGTH X WIDTH X THICKNESS)	10 in x 8 in x 0.280 in (254 mm x 203 mm x 7.1 mm)
810 Mini Hex	PRODUCT DIMENSIONS (LENGTH X WIDTH X THICKNESS)	10 in x 8 in x 0.217 in (254 mm x 203 mm x 5.5 mm)
810 Cones	PRODUCT DIMENSIONS (LENGTH X WIDTH X THICKNESS)	10 in x 8 in x 0.255 in (254 mm x 203 mm x 6.5 mm)
810 Delta	PRODUCT DIMENSIONS (LENGTH X WIDTH X THICKNESS)	10 in x 8 in x 0.196 in (254 mm x 203 mm x 5.0 mm)
810 Tear Drop	PRODUCT DIMENSIONS (LENGTH X WIDTH X THICKNESS)	10 in x 8 in x 0.217 in (254 mm x 203 mm x 5.5 mm)

For additional information or product availability contact Mason Grogan Consumer.