



# Plascore CrushLite™

## Lightweight, Constant Force Energy Absorber

Plascore CrushLite™ is a lightweight aluminum honeycomb core material which is certified to specific crush strengths for energy absorption applications. CrushLite™ yields at a constant force providing reliable and consistent energy absorption in almost any environment.

Available with or without precrush in a wide range of sheet sizes, cut to size, or machined to complex shapes. CrushLite™ can be used as-is, or easily integrated into many applications requiring uni-axial deformable energy absorption.

## Features

- Predictable energy absorption properties
- High crush strength-to-weight ratio
- Efficient constant force crush curve
- Wide range of strengths available
- Crush stroke in excess of 70%
- Excellent moisture and corrosion resistance
- Elevated use temperatures

## Applications

**Aerospace** – Improves crashworthiness protection in seating, or acts as a single event shock absorber for impact protection without adding significant weight.

**Calibration** – Drives the deceleration pulse required to calibrate crash test dummies. Certified for consistent test results.

**Defense** – Serves as both a structural and a crushable member providing dual benefits for support and blast mitigation in areas such as doors, floors, seats, and storage areas for tactical vehicles.

**Dynamic Testing** – Configure sled test decelerators quickly by varying the cross section of the crushable impact area to change the G load of the shock pulse.

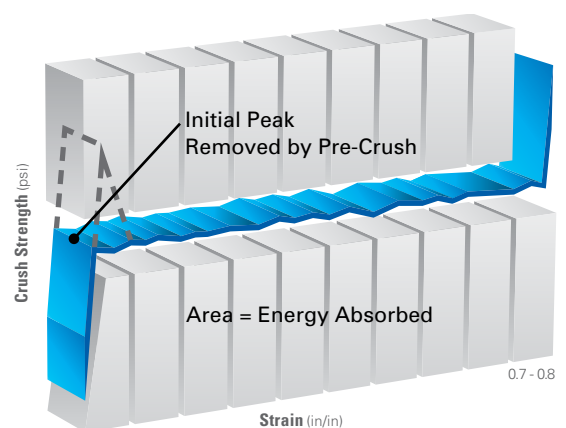
**Industrial Safety** – Provides reliable drop protection that doesn't require service or maintenance. Limits loads to prevent equipment failure or injury.

**Shipping Protection** – Protects sensitive shipping contents such as nuclear materials or delicate equipment. Precise crush strength and high service temperatures facilitate use in many environments with minimal impact on the shipping weight.

**Transportation** – Attenuates impact in Automotive and Rail applications where lightweight, high-performance energy absorption is critical for safety.



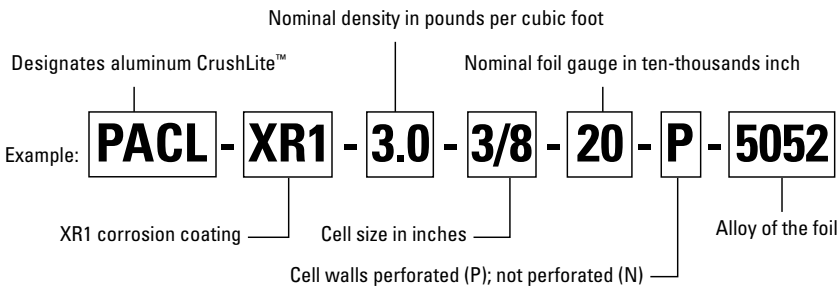
CrushLite™ absorbs energy by crushing under load



Constant force vs. displacement curve provides efficient lightweight energy absorption unique to aluminum honeycomb

# CrushLite™ is specified as follows:

Trade Name - Corrosion Coating - Density - Cell Size - Foil Gauge - Perforation - Alloy



## Availability:

CrushLite™ aluminum honeycomb is available in untrimmed sheets, cut to size, machined, or die cut. Precrushing, load certification, and other operations are available upon request.

Cell Sizes: 1/8" - 1"  
 Densities: 0.6 pcf – 8.1 pcf  
 Sheet "Ribbon" (L): 48" typical maximum  
 Sheet "Transverse" (W): 96" typical maximum  
 Sheet "Thickness" (T): up to 32" maximum

NOTE: Maximum sheet size, thickness, and precrush may be limited on certain core types. Contact a Plascore Representative to determine availability.

Plascore Honeycomb Designation					Crush Properties		
Nominal Density lbs/ft <sup>3</sup>	Cell Size (Inch)	Foil Gauge (Inch)	Available in Perforated	Foil Alloy	Crush Strength <sup>1</sup> (psi)	Standard Crush Tolerance (+/- psi)	Minimum Stroke <sup>2</sup> (%)
0.6	3/4	.0007	+	5052	7.5	2.5	70
1.0	1	.002	+	3003	10	2	70
1.2	1	.003	+	3003	25	5	70
1.0	3/8	.0007	+	5052	25	5	70
1.0	3/8	.0007	+	5056	35	5	70
1.6	3/8	.001	+	5052	45	4.5	70
1.8	3/4	.003	+	3003	45	4.5	70
1.6	1/4	.0007	+	5056	50	5	70
2.0	3/16	.0007	+	5052	75	7.5	70
2.3	3/8	.0015	+	5052	80	8	70
2.3	1/4	.001	+	5052	90	9	70
2.3	1/4	.001	+	5056	100	10	70
3.0	3/8	.002	+	5052	120	12	70
3.6	3/8	.003	+	3003	120	12	70
3.1	1/8	.0007	+	5052	130	13	70
3.4	1/4	.0015	+	5052	140	14	70
3.1	1/8	.0007	+	5056	170	17	70
3.7	3/8	.0025		5052	180	18	70
4.2	3/8	.003		5052	210	21	70
4.3	1/4	.002	+	5052	230	23	70
5.2	1/4	.003	+	3003	245	24.5	70
4.5	1/8	.001	+	5052	275	27.5	70
4.5	1/8	.001	+	5056	320	32	70
5.2	1/4	.0025		5052	330	33	70
5.4	3/8	.004		5052	350	35	70
5.7	3/16	.002	+	5052	380	38	70
6.0	1/4	.003		5052	420	42	70
5.7	3/16	.002	+	5056	440	44	70
6.1	1/8	.0015	+	5052	450	45	70
6.1	1/8	.0015	+	5056	535	53.5	70
8.1	1/8	.002	+	5052	700	70	70
8.1	1/8	FC	+	5052	750	75	70

<sup>1</sup> Crush Strength  
<sup>2</sup> Minimum Stroke  
 Tested per ASTM D7336




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