



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.

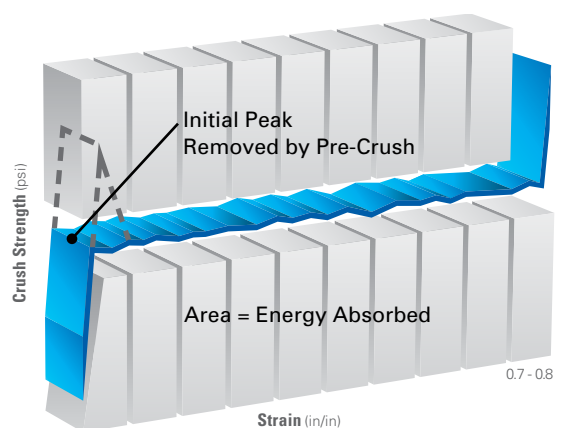
Industrial Safety – Provides reliable drop protection that doesn't require service or maintenance. Limits loads to prevent equipment failure or injury.

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.



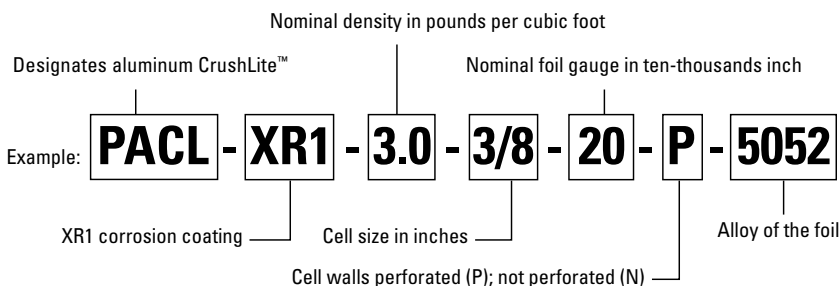
CrushLite™ absorbs energy by crushing under load



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



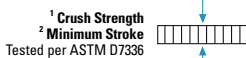
Availability:

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 ³	Cell Size (Inch)	Foil Gauge (mm)	Available in Perforated	Foil Alloy	Crush Strength ¹ (kPa)	Standard Crush Tolerance (+/- kPa)	Minimum Stroke ² (%)
0.6	3/4	0.0178	+	5052	51.71	17.24	70
1.0	1	0.0508	+	3003	68.95	13.79	70
1.2	1	0.0762	+	3003	172.37	34.47	70
1.0	3/8	0.0178	+	5052	172.37	34.47	70
1.0	3/8	0.0178	+	5056	241.32	34.47	70
1.6	3/8	0.0254	+	5052	310.26	31.03	70
1.8	3/4	0.0762	+	3003	310.26	31.03	70
1.6	1/4	0.0178	+	5056	344.74	34.47	70
2.0	3/16	0.0178	+	5052	517.11	51.71	70
2.3	3/8	0.0381	+	5052	551.58	55.16	70
2.3	1/4	0.0254	+	5052	620.53	62.05	70
2.3	1/4	0.0254	+	5056	689.48	68.95	70
3.0	3/8	0.0508	+	5052	827.37	82.74	70
3.6	3/8	0.0762	+	3003	827.37	82.74	70
3.1	1/8	0.0178	+	5052	896.32	89.63	70
3.4	1/4	0.0381	+	5052	965.27	96.53	70
3.1	1/8	0.0178	+	5056	1172.11	117.21	70
3.7	3/8	0.0635		5052	1241.06	124.11	70
4.2	3/8	0.0762		5052	1447.90	144.79	70
4.3	1/4	0.0508	+	5052	1585.79	158.58	70
5.2	1/4	0.0762	+	3003	1689.22	168.92	70
4.5	1/8	0.0254	+	5052	1896.06	189.61	70
4.5	1/8	0.0254	+	5056	2206.32	220.63	70
5.2	1/4	0.0635		5052	2275.27	227.53	70
5.4	3/8	0.1016		5052	2413.17	241.32	70
5.7	3/16	0.0508	+	5052	2620.01	262.00	70
6.0	1/4	0.0762		5052	2895.80	289.58	70
5.7	3/16	0.0508	+	5056	3033.69	303.37	70
6.1	1/8	0.0381	+	5052	3102.64	310.26	70
6.1	1/8	0.0381	+	5056	3688.70	368.87	70
8.1	1/8	0.0508	+	5052	4826.33	482.63	70
8.1	1/8	FC	+	5052	5171.07	517.11	70



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