



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.

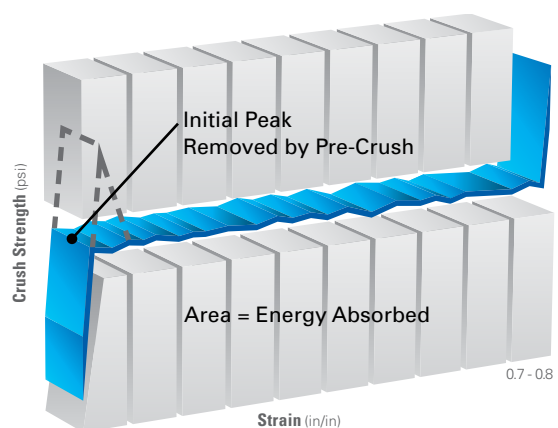
Industrial Safety – Provides reliable drop protection that doesn't require service or maintenance. Limits loads to prevent equipment failure or injury.

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.



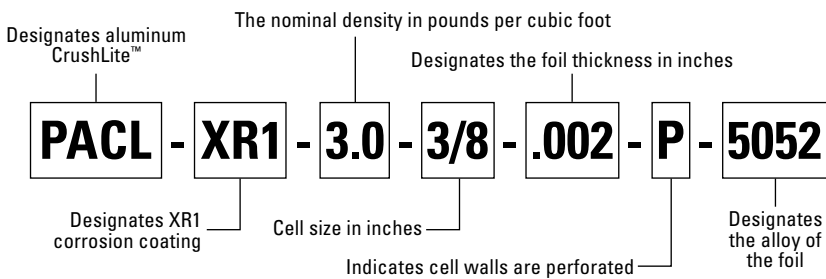
CrushLite™ absorbs energy by crushing under load



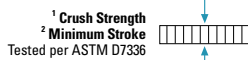
Constant force vs. displacement curve provides efficient lightweight energy absorption unique to aluminum honeycomb

CrushLite™ is specified as follows:

Material - Density - Cell Size - Foil Thickness - Perforated - Alloy



Plascore Honeycomb Designation					Crush Properties		
Nominal Density lbs/ft ³	Cell Size (Inch)	Foil Gauge (Inch)	Available in Perforated	Foil Alloy	Crush Strength ¹ (psi)	Standard Crush Tolerance (+/- psi)	Minimum Stroke ² (%)
0.6	3/4	.0007	+	5052	7.5	2.5	70
1.0	1	.002	+	3003	10	2	70
1.4	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



Plascore, Inc., employs a quality management system that is AS/EN/JISQ 9100, ISO 9001:2008 and ISO 14001:2004 certified.

IMPORTANT NOTICE: The information contained in these materials regarding Plascore's products, processes, or equipment, is intended to be up to date, accurate, and complete. However, Plascore cannot warrant that this is always the case. Accordingly, it is a purchaser's or user's responsibility to perform sufficient testing and evaluation to determine the suitability of Plascore's products for a particular purpose. Information in these materials and product specifications does not constitute an offer to sell. Your submission of an order to Plascore constitutes an offer to purchase which, if accepted by Plascore, shall be subject to Plascore's terms and conditions of sale. PLASCORE MAKES NO WARRANTIES OF ANY KIND REGARDING THESE MATERIALS OR INFORMATION, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Plascore owns and shall retain all worldwide rights in its intellectual property, and any other trademarks used in these materials are the property of their respective owners. The information in these materials shall not be construed as an inducement, permission, or recommendation to infringe any patent or other intellectual property rights of any third parties. © 2012 Plascore, Inc. All Rights Reserved. v01.12

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.



Corporate Headquarters

Plascore Incorporated
 615 N. Fairview St.
 Zeeland, MI 49464-0170
 USA

Phone (616) 772-1220
 Toll Free (800) 630-9257
 Fax (616) 772-1289
 Web www.plascore.com
 Email sales@plascore.com

Europe

Plascore GmbH&CoKG
 Feldborn 6
 D-55444 Waldlaubersheim
 Germany

Phone +49(0) 6707-9143 13
 Fax +49(0) 6707-9143 40
 Web www.plascore.de
 Email sales.europe@plascore.com

