

# PAA-SHH®

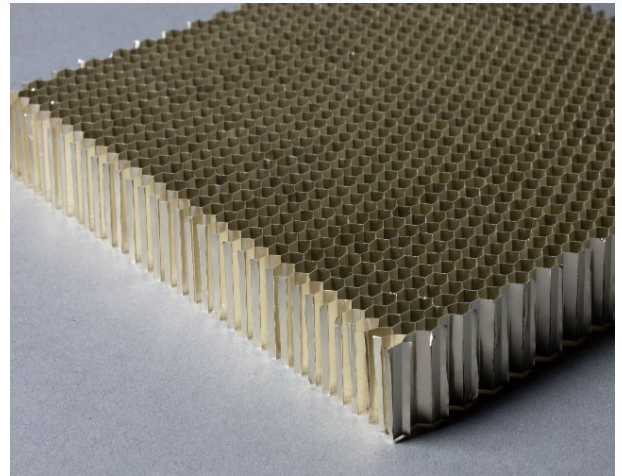
## Phosphoric Acid Anodized Showa Hexagonal Honeycomb

### Description

PAA-SHH® is an aerospace grade 5052 aluminum honeycomb materials produced from phosphoric acid anodized aluminum sheets.

Phosphoric acid anodize gives an excellent corrosion resistance to aluminum alloy, and the surface treatment system with a corrosion prohibited primer provide the greatest bondability and fatigue strength under critical conditions such as hot & wet condition.

PAA-SHH is available in a wide selection of cell sizes and foil thickness.



### Features

- Low weight / High strength
- Superior flatness as sandwich core material
- Excellent energy absorption
- Air / fluid directionalization
- Light diffusion
- Electromagnetic shielding
- Uniform hexagonal shape suitable for decoration uses
- High Corrosion Resistance

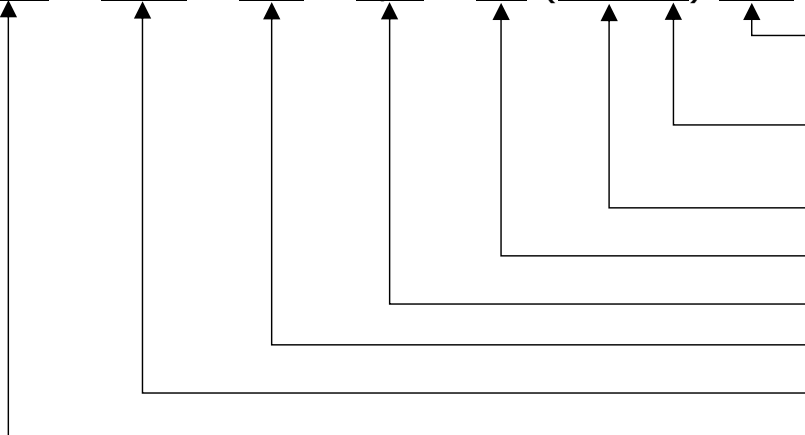
### Applications

- Industrial equipment (tooling table)
- Energy absorbers, Car crash test barriers
- Rectifying device for wind tunnel test equipment and air flow meter Lighting louver
- DeElectromagnetic shielding filter
- Corative applications
- Aerospace products (Satellite, rocket body structure, flap, floor panel)

### Designation

Example

PAA - SHH - 2.3 - 1/4 - 10 (5052N) CL1

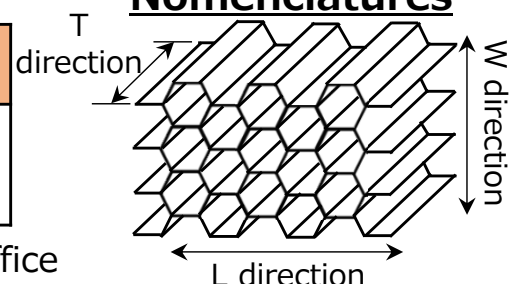


- AMS-C-7438A Class1
- N:Indicates the cell walls are not perforated
- P:Indicates perforated
- Alloy of the foil (Alloy5052,5056)
- Foil Thickness (inch)
- Cell Size (inch)
- Density (pounds per cubic foot)
- Showa Hexagonal Honeycomb
- Phosphoric Acid Anodized

### Standard Dimensions

L direction	W direction	T direction (Min.)
48 +2/-0 inch (1200 +50/-0 mm)	96 +4/-0 inch (2400 +100/-0 mm)	0.12 ±0.01 inch (3.0 ±0.25 mm)

### Dimensional Nomenclatures



NOTE: For more information, please contact our Sales Office

## Mechanical Properties (Alloy 5052)

Cell Size (inch)	Foil Thickness (inch)	Nominal Density (lbs/ft <sup>3</sup> )	Compressive Strength (psi)		Plate Shear Strength (psi)			
					L Direction		W Direction	
			70 to 85°F	350°F	70 to 85°F	350°F	70 to 85°F	350°F
1/8	0.001	4.5	405	262	285	200	168	109
1/8	0.0015	6.1	680	446	455	319	272	177
1/8	0.0020	8.1	1100	722	670	469	400	260
3/16	0.0010	3.1	215	141	155	109	90	59
3/16	0.0015	4.4	385	253	280	196	160	104
3/16	0.0020	5.7	600	394	410	287	244	159
3/16	0.0025	6.9	800	525	540	378	328	213
3/16	0.0030	8.1	1100	722	670	469	400	260
1/4	0.0010	2.3	130	82	100	70	57	37
1/4	0.0015	3.4	250	164	180	126	105	68
1/4	0.0020	4.3	370	243	265	186	155	101
1/4	0.0025	5.2	510	335	360	252	200	130
1/4	0.0030	6.0	660	433	445	312	265	172
1/4	0.0040	7.9	1050	689	650	455	390	254
3/8	0.0010	1.6	70	43	60	42	32	21
3/8	0.0020	3.0	200	131	145	102	85	55
3/8	0.0025	3.7	290	190	205	144	120	78
3/8	0.0030	4.2	360	236	255	179	150	98
3/8	0.0040	5.4	540	367	380	266	228	148
1/2	0.0040	3.9	304	—	214	—	125	—

**NOTE:**

- Above values are the properties when tested per AMS-C-7438A using 0.625 inch core thickness.
- Above values are the minimum values and guaranteed values for the average of five specimens of honeycomb when tested per AMS-C-7438A.
- Honeycomb core made of alloy 5056 can also be manufactured.

**SHOWA AIRCRAFT INDUSTRY CO., LTD.**

Tokyo Sales Office  
 3-1-1 Daikanyama, Akishima-shi, Tokyo, 196-8522 Japan  
 Phone: +81-42-541-8883  
 Fax: +81-42-545-6909  
 e-mail: honeycombsales196@showa-aircraft.co.jp  
 HP: <https://www.showa-aircraft.co.jp/en/index.html>

**SHOWA AIRCRAFT USA INC.**

14711 NE 29th PI Suite 118 - Bellevue,  
 WA 98007, USA  
 Phone: +1-425-202-7238  
 HP: <https://showaircraftusa.com/>