

Showa Aircraft Industry Co., Ltd. Document # TD-018 Org.

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# SAH<sup>®</sup> Commercial Grade Aramid Fiber/Phenolic Resin Honeycomb

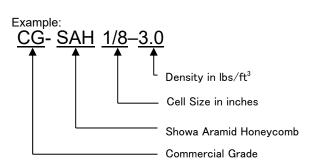
# Description

SAH<sup>®</sup> (CG) is a commercial grade aramid fiber/phenolic resin honeycomb for non-aerospace applications, which is manufactured from Nomex<sup>®</sup> aramid fiber sheets. These sheets are bonded by a thermosetting adhesive at the nodes. After expanded to the hexagonal cell or over-expanded cell configuration, it is dipped in a heat resistant phenolic resin and cured in an oven. The excellent property of SAH<sup>®</sup> has been widely applied in a variety of areas as core material for sandwich panels.

# Features

- Small cell size at low densities
- Damage resistant under normal shop use
- Fire resistant (self-extinguishing)
- Water resistant
- Excellent dielectric properties
- Good thermal and electrical insulator

## Type Designation



## **Standard Dimensions**

•L:	1115	±50 mm	
•W:	2400	±150 mm	
•T :	3mm∼	500 mm	

Standard tolerances on cut thickness are as follows:

- 3.00mm to 50.00mm tolerance will be ±0.15mm • 50.01mm to 100.00mm tolerance will be ±0.25mm
- -50.0 mm and ever telerance will be  $\pm 2.00$  mm
- •100.01mm and over tolerance will be ±3.00mm

NOTE: For more information, please contact our Sales Office.



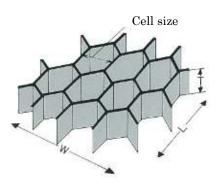
# Applications

- Sports and leisure goods
- Racing car components
- Train car panels
- Antennas panels
- Speaker panels

# **Dimensional Nomenclatures**

L=Ribbon direction

W=Long direction, or direction perpendicular to the ribbon T=Core thickness, or cell depth



# Mechanical Properties of SAH<sup>®</sup> Commercial Grade

	Nominal	Compressive Strength (TYP)			Plate Shear (TYP)				
Designation	Density	Bare		Stabilized		L Direction		W Direction	
	kg/m³	Strength	Modulus	Strength	Modulus	Strength	Modulus	Strength	Modulus
		MPa	MPa	MPa	MPa	MPa	MPa	MPa	MPa
CG-SAH1/8-1.8	29	0.8	47	0.9	_	0.6	25	0.3	14
CG-SAH1/8-3.0	48	2.1	75	2.3	140	1.2	48	0.7	24
CG-SAH3/16-3.0	48	2.1	130	2.3	140	1.0	34	0.7	24
CG-SAH3/16OX-3.0	48	2.5	110	2.8	—	0.8	8.2	0.9	41
CG-SAH1/4-1.5	24	0.6	43	0.7	41	0.5	21	0.3	10

#### NOTE:

1) The above data are the properties when tested per SAE-AMS-STD-401 at room temperature using 0.500" core thickness.

2) The typical values represent the mean average of relatively large number of test values from many blocks of honeycomb, and are not guaranteed.

- 3) Tolerance of the cell size is  $10\% \pm$  of nominal cell size.
- 4) Tolerance of the density is  $10\%\pm$  of nominal density.
- 5) "OX" is an over-expanded hexagonal cell in the W direction, providing a rectangular cell shapes that facilities curving or form in the L direction.
- 6) The core type shown in bold type (CG-SAH-1/8-3.0) is standard.
- 7) The core type shown in small type will be produced on order. One block minimum buy may apply.

## **CONTACT for MORE INFORMATION**

#### **PROFESSIONAL PLASTICS**

1810 E. Valencia Dr. Fullerton, CA 92831 Phone: +1-800-878-0755 Email: honeycomb@proplas.com

#### SHOWA AIRCRAFT USA, INC. 8620 154<sup>th</sup> Ave. NE, Suite 140 Redmond, WA 98052 Phone: +1-425-202-7238 Fax: +1-425-202-7779 https://showaaircraftusa.com/page/contact-us

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