Gillfab™ 4230 Panel

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Description

Gillfab 4230 is an aircraft structural sandwich panel composed of aluminum skins bonded to an aluminum honeycomb core, and qualified to Raytheon Specification TMS 11-903.

Applications

Used in many aircraft for interior applications including bulkheads, shelving, and galley panels. The skin thickness, alloy, honeycomb density, and panel thickness can be ordered to meet end use requirements.

Features

- High strength-to-weight ratio.
- Wide range of cores and facing alloys available.
- Good general purpose sandwich panel.
- Service temperature range: -70°F to 160°F, short term at 250°F.

Specifications

- **Raytheon TMS 11-903**

Construction

Adhesive:	Epoxy adhesive to MMM-A-132 Type 1, Class 2 and 3.
Core:	5052 aluminum foil honeycomb; density and cell size per customer requirement.
Facings:	Aluminum alloy; 2024-T3, 7075-T6.

Availability

Thickness:	Per customer specification from .125" and up.
Size:	Up to 48" x 144" without splices in the facings.
Facing:	Standard aluminum thickness: 0.010”, 0.012”, 0.016", 0.020", 0.032", 0.040", 0.050”, 0.063”
Core:	Density range from 2.3 to 7.9 pcf.
Cell Sizes:	1/4", 3/16”

Standard Tolerances

Thickness:	±0.010"
Length:	+0.5", - 0.125"
Width:	+0.5", - 0.125"
Warpage, max.:	0.025” per foot

Alternative Gill Products

Product Number	Difference
Gillfab 4030	General purpose sandwich panel comprising aluminum facings bonded to an aluminum honeycomb core.
Gillfab 4030L	Qualified to Lockheed LAC-C-28-917.
Gillfab 4030X	Aluminum facings have anodized coating for improved corrosion resistance.
Gillfab 4033	Meets requirements of IAI Ltd, M.S. 04.0015, physical and mechanical requirements, Types 1-6. Facings are primed for maximum bond durability.
Gillfab 4201	Corrosion resistant primer and higher weight adhesive are used for structural application.
Gillfab 5030	Commercial quality version of Gillfab 4030. Uses 3003 alloy honeycomb core.

Properties of Gillfab 4230

Based on 0.5" thick panel with .020"/.020" Thick 2024-T3 ALCLAD Facings, 1/4" Cell Size, 4.3 pcf Nominal Density, 5052-H39 Aluminum Core, Typical Properties

Property	Test Method	Property Measurement
Weight, lbs./ft^2 (kg/m^2)	**GTP-085***	**0.851**
Thickness, ins. (mm)	**GTP-086***	**0.503**
Sandwich Peel, in.-lbs./in. (N/25 mm),	**Raytheon 11-903, ¶ 4.3.1 (ASTM D1781)**	
Minimum Individual		**13.4**
Average		**14.4**
Sandwich Flex Core Splice, psi (MPa)	**Raytheon 11-903, ¶ 4.3.2 (ASTM C 393)**	
Minimum Individual		**322**
Average		**335**
Sandwich Shear, psi (MPa)	**Raytheon 11-903, ¶ 4.3.3 (ASTM C 273)**	
Minimum Individual		**365**
Average		**375**
Sandwich Flexure, psi (MPa)	**Raytheon 11-903, ¶ 4.3.4 (ASTM C 393)**	
Minimum Individual		**362**
Average		**365**

*M. C. Gill Corp. Test Procedure.

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