

## Geneerco Floor #6, Type 55 Sandwich Structures

### 1. Background

General Veneer Manufacturing Co. has been supplying lightweight materials and products to the aircraft and aerospace industry for over 50 years. With the advent of the wide body commercial airplane, new materials were required to meet their specific needs. We were among the first to use these new materials in production and have continued to develop new configurations.

Flooring materials were one of the major areas of concern to the airframe manufacturers, and Nomex<sup>®</sup> Honeycomb was developed for this application. Nomex<sup>®</sup> core possesses excellent high impact strength and performs superbly on the food cart roller test.

With the new advanced composites being developed, it was natural to combine this lightweight core material with our improved phenolic fiberglass laminate for a new concept in bonded composite sandwich panels.

### 2. Product Introduction

Geneerco Floor #6 series is a non-metallic core bonded sandwich panel. This panel offers light weight, high performance, corrosion resistance, flame retardancy, and cost effectiveness in one bonded sandwich panel with reinforced polymer or metallic faces. These qualities make it suitable for use in a wide range of applications such as floors, bulkheads, dividers, galley structures and lavatories.

### 3. Performance

Research and development testing on fatigue properties indicate a long service life can be expected. Geneerco flooring is suitable for many applications and for installations that require quality products at a competitive in-place cost, Geneerco flooring excels.

### 4. Type Identification

Type 55 products utilizes medium density Nomex<sup>®</sup> Honeycomb core, with uni-directional phenolic fiberglass skins.

### 5. Class Identification

Class is based on facing and total thickness. The following charts depict the quality aspects of just a few of our many classes of Geneerco Floor #6, Type 55 product line.

## Generco Floor #6, Type 55 Sandwich Structures

## 6. Typical Physical and Mechanical Properties

Physical Description <sup>①</sup>	Typical Values					Unit
	Class B	Class D	Class E	Class F	Class H	
Generco Floor #6, Type 55						
Weight	.74	.64	.74	.84	1.15	p.s.f.
Overall Thickness	.290	.400	.500	.600	1.00	in.
Skin Thickness	.020	.015	.015	.015	.015	in.
Length • Nominal 96", 120", 144"	Up to 192	Up to 192	Up to 192	Up to 192	Up to 192	in.
Width • Nominal 48", 60", 72"	Up to 72	Up to 72	Up to 72	Up to 72	Up to 72	in.

Panel Strength • Test Method	Typical Values					Unit
	Class B	Class D	Class E	Class F	Class H	
Generco Floor #6, Type 55						
Stabilized Compression • MIL-STD-401	1600	1600	1600	1600	1600	p.s.i.
Long Beam Bending • MIL-STD-401 (20 in. Span, 1/4 Point Loading)	230	230	600	700	750	lb.
Deflection at 100 lbs.	1.2	1.2	.40	.35	.20	in.
Climbing Drum Peel	30	30	30	30	30	in-lb/3 in.
Flammability • 60 Sec. Vertical Ignition	15	15	15	15	15	sec.
Panel Shear • MIL-STD-401	500	500	850	925	1000	lb.
Impact	50	50	45	45	45	in-lb
Nominal Core Density	9.0	9.0	9.0	9.0	9.0	p.c.f.
Heat Release • FAR,25.853 Para. A-1	90/90	90/90	90/90	90/90	90/90	max.

- ① Panels are available in other thicknesses, widths, lengths and core densities per customer request.
2. Nomex<sup>®</sup> is a registered trademark of DuPont.
3. Class A, C and G are reserved for future use.