

## KYDEX® 6523HI

High impact, integral pearlescent aviation sheet

### Introduction

KYDEX® 6523HI is a proprietary, high performance thermoplastic sheet with integral colour specifically engineered to improve aircraft passenger safety. Integrally pearlescent, this sheet is perfect to use with LED lighting or on its own.

### General Information

KYDEX® 6523HI is designed to provide material deformation when used in components subjected to the HIC (Head Injury Criterion) Test for increased passenger safety. Its integral pearlescent colour gives the appearance of painted metal and allows light weighting and increased durability when replacing composite and metal panels. It meets the flammability and smoke development requirements outlined in FAR 25.853(a) and (d).

### Suggested Applications

- Seat parts
- Bulkhead laminates
- Moulding strips
- Armrests
- Life vest shrouds
- Monitor shrouds
- Passenger service units
- Tray tables
- Kick panels

### Features

- Improved impact properties over traditional thermoplastics for HIC compliance seating requirements
- Meets the stringent requirements of FAR 25.853(d) in all thicknesses and colours
- Excellent formability and fabrication characteristics
- Allows for tight tolerance control
- Increases design freedom to create more complex seat geometries
- Available in a wide range of integral colours
- Available in P3 - Velour Matte

### Environmental and Safety Considerations

SEKISUI SPI is committed to ensuring that its products can be manufactured, transported, stored, used, disposed and recycled with an appropriate regard for safety, health and environmental protection. We support the safe handling of our products. Please contact our Technical Service department at 800.682.8758 for resources or visit our website: <http://www.sekisui-spi.com>. For Material Safety Data Sheets, please call 800.325.3133.

#### SEKISUI SPI

##### Customer Service

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### Physical Properties

Property	Test Method	Typical Value	
<b>PHYSICAL</b>			
Specific Gravity	ASTM D-792	1.46	
Water Absorption, 24 hr	ASTM D-570	0.05%	
Rockwell Hardness, R-Scale	ASTM D-785	104	
<b>MECHANICAL</b>			
Tensile Strength	ASTM D-638	38.3 MPa	5,560 psi
Tensile Modulus	ASTM D-638	3,558 MPa	516,000 psi
Poisson's Ratio	ASTM D-638	0.382	
Flexural Strength	ASTM D-790	67.7 MPa	9,820 psi
Flexural Modulus	ASTM D-790	3,420 MPa	496,000 psi
Compressive Strength, yield	ASTM D-695	56.1 MPa	8,130 psi
Compressive Modulus	ASTM D-695	3,116 MPa	452,000 psi
Shear Strength	ASTM D-732	38.6 MPa	5,600 psi
Bearing Strength, 4% deflection	ASTM D-953	33.4 MPa	4,840 psi
Bearing Strength, max	ASTM D-953	204.8 MPa	29,700 psi
Gardner Drop Dart Impact, GE geometry	ASTM D-5420	51.5 J	456 in-lb <sub>f</sub>
<b>THERMAL</b>			
Heat Deflection Temperature (HDT) @ 264 psi (1.8 MPa) annealed	ASTM D-648	79.1°C	174°F
Coefficient of Thermal Expansion	ASTM E-831	58.6 µm/m/°C	32.5 µin/in/°F
<b>ELECTRICAL</b>			
Dielectric Strength, oil	ASTM D-149	> 24.8 kV/mm	> 630 V/mil
<b>FLAMMABILITY<sup>2</sup></b>			
Vertical Burn, 60-second	FAR 25.853(a) Part 1 (a)(i)	Pass	
Vertical Burn, 12-second	FAR 25.853(a) Part 1 (a)(ii)	Pass	
OSU Heat Release	FAR 25.853(d) Part IV	Pass	
NBS Smoke Density	FAR 25.853(d) Part V	Pass	
<sup>1</sup> Values based upon 3.18mm (0.125") sheet unless otherwise specified. <sup>2</sup> All thicknesses and colours Not intended for specification purposes.			

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