KYDEX® 6565HI

High impact, low heat release aviation sheet

INTRODUCTION

KYDEX® 6565HI is a proprietary, high performance thermoplastic sheet with integral colour specifically engineered to improve aircraft passenger safety.

GENERAL INFORMATION

KYDEX® 6565HI was designed to provide material deformation when used in components subjected to the HIC Test (Head Injury Criterion) for increased passenger safety. It meets flammability and smoke development requirements outlined in Federal Aviation Regulations FAR 25.853 paragraphs (a) and (d).

SUGGESTED APPLICATIONS

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

FEATURES

- Improved impact properties over traditional thermoplastics for HIC compliance seating requirements
- Reduces cost of compliance by decreasing the total number of expensive and time consuming 16g tests required
- Increases design freedom to create more complex seat geometries
- Decreases weight by eliminating the need for heavy reinforcements or thick gauges
- Meets the stringent requirements of FAR 25.853 paragraphs (a) and (d) in all thicknesses and colours
- Excellent formability and fabrication characteristics
- Processes similar to KYDEX® 6565
- Allows for tight tolerance control
- Available in a wide range of integral colours

ENVIRONMENTAL & SAFETY CONSIDERATIONS

SEKISUI KYDEX, LLC 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 appLab™ department at 800.682.8758 for resources and Safety Data Sheets or visit our website: www.kydex.com.

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KYDEX THERMOPLASTICS

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Property	Test Method	Typical Value[1]	
PHYSICAL			
Specific Gravity	ASTM D792	1.46	
Water Absorption, 24hr	ASTM D570	0.06%	
Rockwell Hardness, R-Scale	ASTM D785	100	
MECHANICAL			
Tensile Strength	ASTM D638	42.3 MPa	6,130 psi
Tensile Modulus	ASTM D638	2,723 MPa	395,000 psi
Poisson's Ratio	ASTM D638	0.397	
Flexural Strength	ASTM D790	66.7 MPa	9,680 psi
Flexural Modulus	ASTM D790	2,751 MPa	399,000 psi
Compressive Strength, yield	ASTM D695	55.6 MPa	8,070 psi
Compressive Modulus	ASTM D695	2,772 MPa	402,000 psi
Shear Strength	ASTM D732	46.0 MPa	6,670 psi
Bearing Strength, 4% deflection	ASTM D953	38.0 MPa	5,510 psi
Bearing Strength, max.	ASTM D953	187.5 MPa	27,200 psi
Gardner Drop Dart Impact, GE	ASTM D5420	69.8 J	618 in-lb$_f$
Puncture Energy, 3.3 m/s	ASTM D3763	43.0 J	31.7 ft-lb$_f$
THERMAL			
Heat Deflection Temperature (HDT) @ 264 psi (1.8 MPa), annealed	ASTM D648	75.3°C	168°F
Coefficient of Thermal Expansion	ASTM E831	68.5 µm/m/°C	38.0 µin/in/°F
ELECTRICAL			
Dielectric Strength, oil	ASTM D149	18.9 kV/mm	480 V/mil
FLAMABILITY[2]			
Vertical Burn, 60-second	FAR 25.853(a)(i)	PASS	
Vertical Burn, 12-second	FAR 25.853(a)(ii)	PASS	
OSU Heat Release	FAR 25.853(d) Part IV	PASS	
NBS Smoke Density	FAR 25.853(d) Part V	PASS	

1 Values based upon 3.20mm (0.125") sheet unless otherwise specified.
2 All thicknesses
Not intended for specification purposes.

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