

Ultem* 1613 Sheet

Product Datasheet

Description

Ultem 1613 sheet is an impact-modified polyetherimide opaque interior aircraft material used in flat and thermoformable applications. Ultem 1613 sheet complies with the FAA regulations effective in 1988 and complies with OSU 100/100 heat release as well as offering low smoke generation and excellent chemical resistance.

Typical Property Values ♦ (Imperial)

Property	Test Method	Unit	Value
Physical			
Specific Gravity (Color Dependent)	ASTM D792	--	1.25 - 1.32
Water Absorption, equilibrium, 24 hrs	ASTM D570	%	0.55
Mechanical			
Tensile strength @ Yield	ASTM D638	psi	12,000
Ultimate			10,000
Flexural Strength	ASTM D790	psi	18,000
Flexural Modulus	ASTM D790	psi	360,000
Flexural Fatigue @ 1,000 psi	ASTM D671	cycles	>6,000,000
Compressive Strength	ASTM D695	psi	8,200
Elongation @ yield	ASTM D638	%	7
Ultimate			50
Dynatup Impact Strength, @ 125 mils	Dynatup	ft-lbs	40
Izod Impact Strength Notched	ASTM D 256A	ft-lbs/in	1
Unnotched			17
Gardner Impact Strength, @ 125 mils	Gardner	in-lbs	>320
Thermal			
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	340
@ 66 psi			380
Electrical			
Dielectric Strength @ 125 mils	ASTM D149	V/mil	425
Dielectric Constant @ 100 Hz to 1,000,000 Hz	ASTM D150	—	3.42
Dissipation Factor @ 100 Hz to 1,000,000 Hz	ASTM D150	—	0.007
Volume Resistivity @ 73°F, dry	ASTM D257	ohm-cm	2.1 x 10 ¹⁶
Flammability#			
Radiant Panel Index	ASTM E162		
Is		—	<18
Flaming Drips		—	No
OSU Heat Release Rate @ 3.5 W/cm ²	OSUHRRC		
@ 2 min		kw·min/m ²	<85
@ peak		kw·m ²	<92
NBS Smoke, Flaming Mode	ASTM E662		
Ds, 1.5 min		—	<10
Ds, 4 min		—	<100
FAA Flammability @ 40 to 125 mils	FAR 25.853/BSS 7230	—	Pass
ATS 1000, Issue 5, Sections 5.1.1.1 & 5.1.1.2	—	—	Pass

(Metric values on reverse)

♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC Innovative Plastics' representative or the Quality Services Department.

These ratings are not intended to reflect hazards presented by this or any other material under actual fire conditions.

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Ultem*

Typical Property Values ♦ (Metric)

Property	Test Method	Unit	Value
Physical			
Specific Gravity (Color Dependent)	ASTM D792	—	1.25-1.32
Water Absorption, Equilibrium, 24 Hrs	ASTM D570	%	0.55
Mechanical			
Tensile Strength @ Yield	ASTM D638	MPa	83
Ultimate			69
Flexural Strength	ASTM D790	MPa	125
Flexural Modulus	ASTM D790	MPa	2,510
Flexural Fatigue	ASTM D671	cycles	>6,000,000
Compressive Strength	ASTM D695	MPa	57
Elongation @ Yield	ASTM D638	%	7
Ultimate			50
Gardner Impact Strength @ 3.2mm @ 23°C	Gardner	J	>37
Dynatup Impact Strength @ 3.2mm @ 23°C	Dynatup	J	52
Izod Impact Strength Notched	ASTM D256A	J/m	50
Unnotched			900
Thermal			
Heat Deflection Temperature	ASTM D648	°C	
@ 1.82		MPa	171
@ 0.46		MPa	193
Electrical			
Dielectric Strength @ 3.2 mm	ASTM D149	kV/mm	16.7
Dielectric Constant @ 100 Hz to 1,000,000 Hz	ASTM D150	—	3.42
Dissipation Factor @ 100 Hz to 1,000,000 Hz	ASTM D150	—	0.007
Volume Resistivity @ 23°C, dry	ASTM D257	ohm-cm	2.1 x 10 ¹⁶
Flammability#			
Radiant Panel Index	ASTM E162		
Is		—	<18
Flaming Drips		—	No
OSU Heat Release Rate @ 3.5 W/cm ²	OSUHRRC		
@ 2 min		kw-min/m ²	<85
@ peak		kw-m ²	<92
NBS Smoke, Flaming Mode	ASTM E662		
Ds, 1.5 min		—	<10
Ds, 4 min		—	<100
FAA Flammability @ 1.0 to 3.2 mm	FAR 25.853/ BSS 7230	—	Pass
ATS 1000, Issue 5, Sections 5.1.1.1 & 5.1.1.2	—	—	Pass

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