

## Ultrason® High Temperature Thermoplastics

Ultrason® resins are high performance polymers derived from poly-ethersulfone (PESU) and polyphenylsulfone (PPSU). Their wide property spectrum allows them to be used in high-quality technical components and heavy-duty products. Ultrason can be used in place of thermosets, such as epoxy, phenolics, metals, and ceramics.

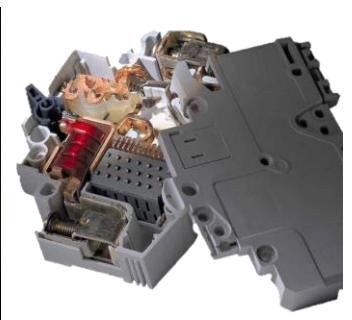


### Key Features

- Outstanding strength and toughness
- High mechanical and dimensional stability
- Chemical, fuel, and oil resistance at high temperatures
- Exceptional surface quality
- Wear and impact resistance
- Excellent FST behavior
- High long-term use temperatures

### Aerospace Applications

By virtue of their thermo-mechanical characteristics and favorable FST behavior, Ultrason is an excellent fit for aerospace interiors. Typical applications include seating components (track covers, arm rests, and tray tables), accessory parts (air ducts, splash guards, and cables), galley components (catering materials, turn handles, trolleys), impact modifiers for epoxy, and additive manufacturing.



## Flame Retardance and Regulatory Compliance

FLAME TESTS	METHOD	UNREINFORCED			REINFORCED			
		P 3010	E 1010	E 2010	E 2010 G4	E 2010 G6	E 2010 C6	PESU LCF 6
FST Compliance	FAR 25.853	P	P	P	P	P	P	P
12 Sec Burn 0.04" to 0.125"		P	P	P	P	P	P	P
60 Sec Burn 0.04" to 0.125"		P	P	P	P	P	P	P
Smoke Density 0.08"		P	P	P	P	P	P	P
Smoke Toxicity, Flaming 0.08"		P	P	P	P	P	P	P
Smoke Toxicity, Non-Flaming 0.08"		P	P	P	P	P	P	P
OSU 65/65		P	F	F	F	P	P	P

## Technical Specifications

PROPERTY	METHOD	UNREINFORCED			REINFORCED			
		P 3010	E 1010	E 2010	E 2010 G4	E 2010 G6	E 2010 C6	PESU LCF 6
Density (g/cm <sup>3</sup> )	ISO 1183	1.29	1.37	1.37	1.50	1.59	1.47	1.45
Tensile Modulus (ksi)	ISO 527-2	330	384	384	1,060	1,420	3,190	4,640
Tensile Strength (psi)		10,700		13,100	18,100	20,300	26,800	36,300
HDT/A (°F)	ISO 75-2	388	397	401	432	428	435	410
CLTE (10 <sup>-4</sup> °F <sup>-1</sup> )	ISO 75-2	0.31	0.29	0.29	0.11	0.08	0.02	-/-
Charpy Impact Notched (ft·lb/in <sup>2</sup> )	ISO 179/1eA	36	3.1	3.3	3.1	3.8	3.6	-/-
Izod Impact Notched (ft·lb/in <sup>2</sup> )		26	3.1	3.3	3.8	4.5	3.1	-/-
Glass Content (%)		0	0	0	20	30	30	30
Tg (°C)		428	437	437	437	437	437	437

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