

## CONSIDER ULTEM™ RESINS AS AN ALTERNATIVE SOLUTION TO POLYSULFONE

ULTEM™ resin has the potential to serve as an alternative material to polysulfone and supports certifications for a variety of industry segments.

Leverage the many benefits ULTEM resin offers for your high performance applications.

### ULTEM RESIN OFFERS:

- Lead times of approximately 4 weeks\*
- Up to 55% higher stiffness
- Better dimensional stability vs. PSU
- Excellent property retention at elevated temps:  
T<sub>g</sub> - 217°C, HDT @ 1.80 MPa: 190°C
- Up to 17% lower CTE than PES/PPSU
- Chemical resistance
- Metal plating compatibility
- Compatibility with multiple sterilization methods
- Availability for stock shapes & films

### CASE STUDY: PES TO ULTEM RESIN CONVERSION

Our customer observed improvements in the following areas:

- ~7% lower specific gravity – decreases material needed to make parts
- ~7% production yield increase:  
ULTEM resin: ~94% useable yield vs. PES ~88%
- ~6% increase in machine throughput
- Increased confidence in supply chain

### A POTENTIAL SOLUTION FOR A VARIETY OF INDUSTRIES:



MOBILITY



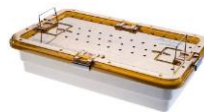
CONNECTORS



WATER



FOOD SERVICE



HEALTHCARE



AEROSPACE

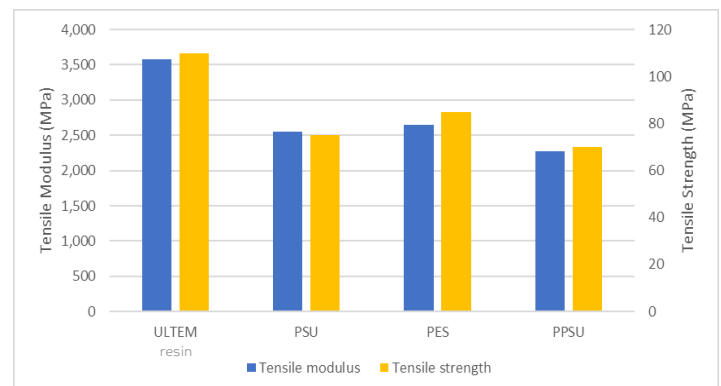


5G ANTENNAS  
/ RADOMES



SEMI-CONDUCTORS

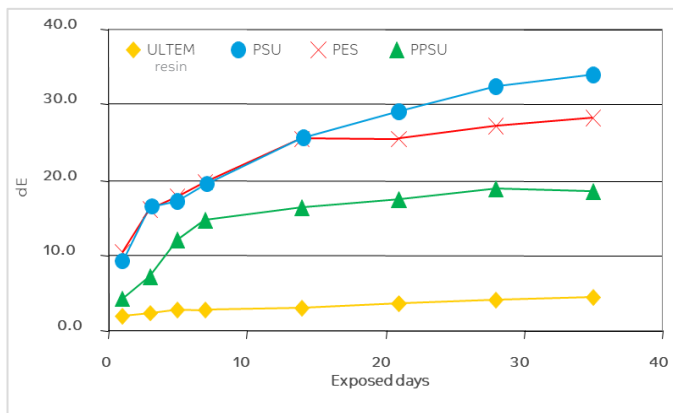
### MECHANICAL PERFORMANCE



\* Lead times subject to change.

# ULTEM™ RESIN VS. POLYSULFONES

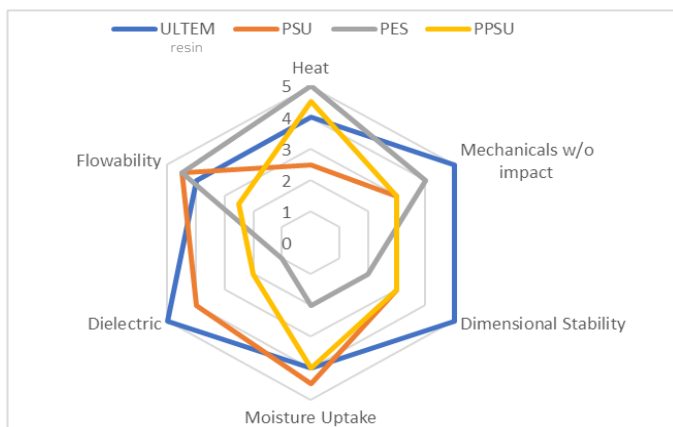
## UV RESISTANCE (ASTM G26)



## CHEMICAL RESISTANCE (1=poor; 10=excellent)

|                          | ULTEM™ resin | PES | PSU | PPSU |
|--------------------------|--------------|-----|-----|------|
| Aromatic Hydrocarbons    | 3            | 1   | 1   | 4    |
| Aliphatic Hydrocarbons   | 10           | 10  | 7   | 10   |
| Chlorinated Hydrocarbons | 3            | 3   | 1   | 5    |
| Alcohols                 | 10           | 7   | 7   | 10   |
| Inorganic Base           | 1            | 10  | 10  | 10   |
| Acetates / Ketones       | 4            | 1   | 1   | 4    |
| Acids                    | 7            | 7   | 7   | 7    |

## ULTEM RESIN VS. POLYSULFONES



## ULTEM RESIN MAY SUPPORT:

- Electrical: UL94 V0 & 5VA, UL94 F1, UL746B
- Telecom: Telcordia GR-326, TIA/EIA-604-10A
- Mobility: FMVSS, IATF 16949, ISO 14001
- Food Service: FDA, NSF, EFSA, JHOSPA
- Water: NSF, WRAS, KTW
- Semiconductors: FM
- Healthcare: ISO 10993, FDA, USP Class VI, compatible with multiple sterilization methods
- Aerospace: ABD 0031, BMS, FAR25.853, OSU 55/55 & NBS smoke density tests

## CONTACT YOUR SALESPERSON FOR MORE DETAILS.

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