

ULTEM™ RESIN FOR TOUGH, LIGHTWEIGHT EYEWEAR FRAMES

WHAT IS ULTEM RESIN?

ULTEM (PEI) resin is an amorphous thermoplastic that provides exceptional flexibility, flame retardancy, resistance to chemicals, heat and UV light, as well as greatly expanded design freedom.

ULTEM RESIN ATTRIBUTES FOR EYEWEAR FRAMES

- Super tough
- Meets JIS B7285, includes 20,000 cycles blending repetitions
- Long life cycle
- UV stabilized
- Light weight
- Excellent in chemical and hydrolytic resistance
- Excellent dimensional stability
- Thin wall molding down to 1.2 mm
- Long term heat resistance (RTI > 170°C)
- Available in custom colors



ULTEM resin delivers a broad range of desirable performance properties for eyeglass frames and is also potentially usable in safety and 3D eyewear frames.



ULTEM resin offers:

DIMENSIONAL AND HYDROLYTIC STABILITY

- Ensures the lenses are retained in the frame
- Extends the product life cycle

TEMPERATURE AND CHEMICAL RESISTANCE

- Excellent stain and chemical resistance
- High heat deflection temperature protects the frames even when left on the car dashboard in direct sunlight

DESIGN FREEDOM & EASE OF PRODUCTION

- Precision thin wall molding at 1.2 mm
- Capability for custom colors providing a wide range of aesthetic effects
- Enhanced processing window vs. nylons

DENSITY

- Intrinsically lightweight (up to 50% vs. metal)

MECHANICAL PROPERTIES

- Higher flexural modulus at 3510MPa
- Offers elasticity coupled with resistance to deformation, allowing the frame to bend easily yet return to its original shape



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