QUANTSIL

Luminescent Transparent Silicone Elastomer

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Quantsil is an innovative Quantum Dots containing silicone-based clear and transparent elastomer possessing luminescent and UV filter properties.

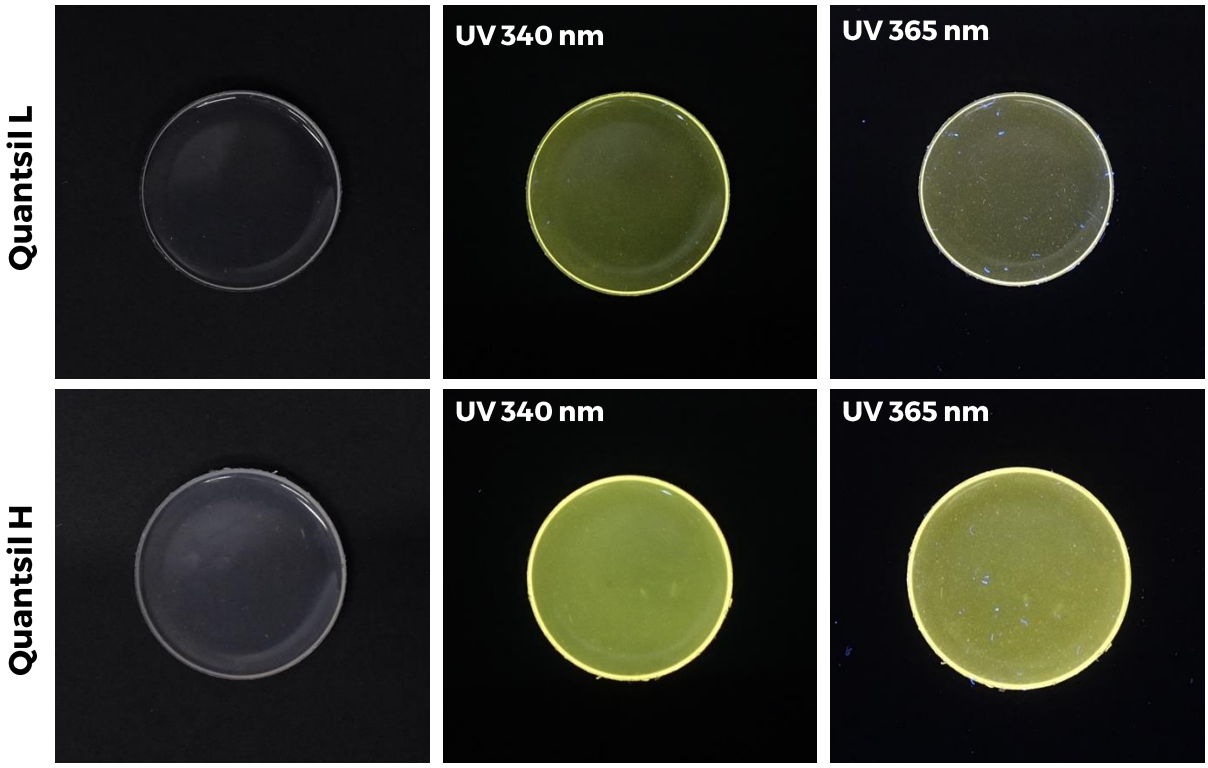
Quantsil L with low and **Quantsil H** with high luminescent index are supplied as a two-part liquid component kit for the preparation of a hydrophobic, flexible, precise molding and encapsulation silicone material. The difference between these products is a concentration of quantum dots based luminescent pigment (ZnO-QDs).

The mixture (10 to 1 mix ratio) can be cured at room temperature (2 days) or at elevated temperatures (for several dozen of minutes). The resulting cured polydimethylsiloxane (PDMS) is chemically inert, has good gas permeability, thermal stability and it is optically transparent. Multiple packaging sizes are available for this product.

APPLICATIONS

- Microfluidic and polymeric devices
- Soft lithographic applications
- Biomedical devices
- Tissue engineering applications
- Macroporous 3D scaffolds
- Surfactants and antifoaming agents
- UV filter
- LED Lighting encapsulation
- Sensors
- Adhesive / paint
- Solar concentrator
- Encapsulant for PV cells

Examples of cured 2 mm thick **Quantsil L** and **Quantsil H** in a daylight and exited with 340 nm and 365 nm UV light.



TYPICAL PROPERTIES OF CURED QUANTSIL:

- Appearance — Clear, transparent (Quantsil H sligthly less transparent)
- Emission — 535 nm (yellow)
- Excitation — optimal 340 nm (up to 365 nm)
- Durometer/Hardness: — ca. 48

UV FILTER EFFICIENCY:

Quantsil L: 55% UV at 340 nm, 30% UV at 365 nm*

Quantsil H: 80% at UV 340 nm, 55% UV at 365 nm*

*measured %loss of UV light intensity with applied 2 mm thick of Quantsil protection.
Intensity of UV light at the test point: 2,70 mW/cm² at 340nm and 2,30 mW/cm² at 365nm.

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