SCHOTT Deep UV-200 Silicone Adhesive

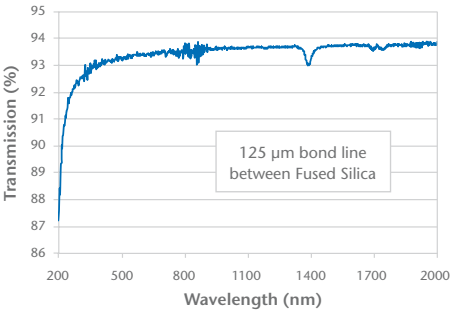
Deep UV-200 is a one-part thermally cured silicone adhesive for use in applications that require high ultraviolet, visible, and near infrared transmission. Deep UV-200 has been engineered to have low out-gassing, low reactivity to gamma and electron radiation, and thermal stability to 220°C. Application can be performed between room temperature and 90°C by spraying, dipping, or casting. Curing is performed between 140 and 180°C for 12 to 24 hours, depending on the flexibility desired. Deep UV-200 can also be used as a potting compound and to cast monolithic parts.

Key attributes

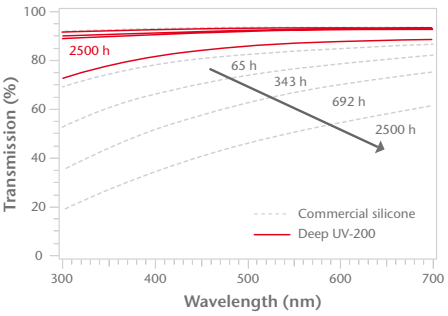
- High UV transmission
- Low outgassing
- Bonds to a wide variety of substrates
- Stable to gamma and electron radiation
- Thermal stability to 220 °C
- One year shelf life if stored properly
- Pot life of several hours (below 90 °C)

Typical Values of Measured Properties	
Coefficient of thermal expansion	250 ppm/˚C
Dielectric constant	4.25 @ 1 MHz
DC Resistance (150 °C)	1.4 x 10^{14} ohm-cm @ 1000 V
Density	1.22 g/cm^3
Index of Refraction (room temperature using Na D line)	1.42
Out-gassing	<1.00 % total mass loss <0.10 % collected volatile condensable material ~ 0.03 % water vapor recovered
Transmission (10 µm film)	>90 % 220 – 2500 nm
Viscosity (Uncured, 25 °C)	10,000 poise
Hardness	15 – 95 Shore A (depending on curing conditions)

UV-VIS-NIR Transmission



UV Exposure Testing



Applications

- Photovoltaic solar cells
- Concentrating solar arrays
- UV-LEDs
- Lightweight mirror bonding
- Glass-to-metal bonding
- Bonding to gold – US Patent 8,323,800

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