

# ThreeBond 3164

UV Resin

ThreeBond **3164** is a one component solvent free UV curing resin. It cures within a few seconds at room temperature when irradiated by ultra-violet light on wavelength between 200 to 400nm.

## 1. Features

- Silicone base
- One component solvent free
- UV + Moisture curing
- Service temperature : -40 / +200 (250)°C
- Potting, coating, fixing and sealing components
- LMW (Low molecular weight) reduced

## 2. Properties

### Before curing

Test	Results	Unit
Colour	White	-
Viscosity at 25°C	50	Pa.s
Specific gravity at 25°C	1.0	-

### After curing (UV + Moisture)

 3000mJ/cm<sup>2</sup> + 7 days at 25°C, 55%RH

Test	Results	Unit
Volume resistivity	1.3 x 10 <sup>13</sup>	Ω.m
Surface resistivity	1.3 x 10 <sup>15</sup>	Ω
Dielectric constant at 1MHz	2.98	-
Dielectric dissipation factor at 1MHz	0.0073	-
Dielectric breakdown voltage	15.6	kV/mm

### After curing (UV only)

 3000mJ/cm<sup>2</sup>

Test	Results	Unit
Hardness	28	Shore A
Elongation	177	%
Tensile strength	1.5	MPa

### After curing (Moisture only)

7 days at 25°C, 55%RH

Test	Results	Unit
Hardness	30	Shore A
Elongation	132	%
Tensile strength	1.3	MPa

## 3. UV curing properties

Conditions	Thickness	Unit
3000 mJ/cm <sup>2</sup>	5.0	mm
6000 mJ/cm <sup>2</sup>	9.0	

### Ageing tests

Conditions	Hardness %	Elongation %	Tensile strength %
Initial	100	100	100
Heat resistance at 150°C after 7 days	108	153	184
Thermal shock : -40 / +150°C, 30min each for 500 cycles	140	131	119

## 4. Handling

- Before use, please refer to the safety data sheet.
- Prior to opening the container, let it reach room temperature to avoid condensation inside.
- To obtain optimal results, remove humidity, grease and other impurities from the surfaces to be assembled.
- Depending on the materials (dimensions and surface roughness), apply an appropriate and uniform amount of liquid gasket on the surface, then assemble rapidly.

Data given here were compiled to the best of our knowledge and are based on experiments and tests of our Company. We cannot guarantee the results obtained through the use of our products, and all products are sold and samples given without any warranty, expressed or implied, of fitness for any particular purpose or otherwise and upon condition that the user shall make his own tests to determine the suitability of the product for his purpose.

- The curing time under UV light may vary depending on the resin thickness, the power source and its distance. Use an appropriate UV source.
- The product may reach its final properties 24h after UV irradiation. We recommend waiting for this time before conducting trials.
- The product once transferred into another container should not be returned to the original one. Any excess product should be wiped out using a cloth.
- Excess product may be removed using TB2890D cleaner.
- Keep the product in its original container tightly sealed and store it in a dark, dry and well ventilated place at **5 ~ 10°C**.