Ultrabond™ for UV bonding

Main Benefits

- Reduces assembly time with fast curing and fixturing in seconds
- Increases production with option for automated dispensing and curing
- Simplifies process as adhesives cure only on command without mixing or pot life concerns
- Increases design options with a second or third cure mechanism for areas out of reach with a UV system

Features

- Dedicated UV cure systems cure only when exposed to UV light. All Ultrabond adhesives respond to exposure of high intensity UV in the range of 365 nm and 100 mW/cm^2 intensity. Some Ultrabond systems function well with low intensity lamps. Cure speeds are longer and gap fill ability is lowered under these conditions.
- Dual-cure or tri-cure systems offer temperature and/or primer curing in addition to UV curing.

Typical Applications

- Medical devices
- Shallow potting and encapsulation
- General electronic component bonding
- Terminal insulation sealing
- Lens and prisms
- Display screens and shields

Application Notes

- UV curing performance depends on the intensity of UV source and the UV transmissivity of the substrates.
- Intensity of the UV source which in turn depends on;
  - the lamp power
  - the spectral output of lamp - a lamp with full range of UV-A,B & C output enables faster curing than one with filtered output
  - the distance between the lamp and the substrate
  - the exposure time and
  - the age of the lamp
- UV transmission characteristics of the substrates;
  - color and gloss of the bottom substrate - a dark surface slows down or prevents curing
  - UV transmissivity of the top substrate - some clear plastic may contain UV inhibitors
- For large cure depth, curing is enhanced by wavelength greater than 350nm, visible light cure system or a secondary cure mechanism.

	Ultrabond™ 706	Ultrabond™ 735	Ultrabond™ 736	Ultrabond™ 740	Ultrabond™ 757	Ultrabond™ 782	Ultrabond™ 787
Key Performance	Penetrating action, For preassembled parts	General purpose	High impact strength	High optical clarity	Fast curing, Self levelling	Tri-cure, High service temperature	Toughened flexibility
Main Substrates	Various	Metal	Metal	Glass	Various	Metal	PVC, PC, Thermoplastics
Color	Clear/Amber	Amber	Amber	Clear	Amber	Amber	Amber
Viscosity, cP	110	6500	20 000	7000	6000	$70x10^6$ to $90x10^6$	5000
Depth of Cure, mm	4	0.508	5	3.5	3	0.508	0.25
Curing Method	UV or visible	UV or EF™50	UV or EF™56	UV Only	UV or visible	UV or heat or EF™63	UV Only
Curing Schedule	5 to 10 sec	5 to 15 sec or 4 to 5 min with EF™ 50	5 to 15 sec or 4 to 5 min with EF™ 56	5 to 10 sec	1 to 2 sec	5 to 10 sec of UV or 3 min with EF™ 63 or 10 min @150°C	5 to 30 sec
Temperature Range, °C	-55 to 110	-55 to 110	-55 to 135	-55 to 121	-55 to 135	-40 to 204	-55 to 110