

LED Adhesives



Permabond Engineering Adhesives manufactures adhesives that are trusted for the many bonding, coating and sealing applications found in LED manufacturing and assembly. Following are a few examples.

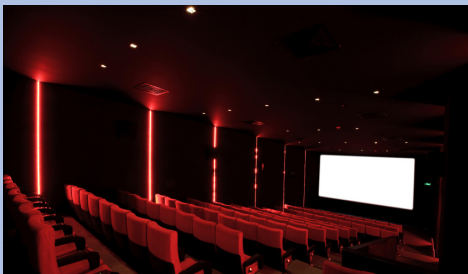
Light Fixtures

Application: Bonding Copper Wire to Aluminum Light Fixtures
Permabond ES578, single component, heat cure epoxy provides excellent thermal conductivity and is electrically insulating. Permabond ES578 is also used to bond heat sinks onto PCBs.



Benefits of Permabond ES578:

- Single component - No Mix Step Required
- Excellent Thermal Conductivity
- Electrically Insulating
- The cured adhesive has been designed to meet the fire retardancy requirements of UL94 V-0.
- Non-Sag Properties - will not flow during cure.



Adhesive used: Permabond ES578

LED Light Strip Bonding



Application:

LED Strips are bonded into buses, Permabond ET515 bonds light strips on various surfaces. Providing durable and invisible bonds through a simplified process of dispensing through static mix nozzles.

Adhesive used: Permabond ET515

Dome Coat

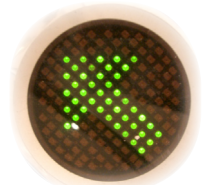
Application: Dome Coating LEDs

Permabond UV683 provides a protective coating over LED lights.

Benefits of Permabond UV683:

- Fast Room Temperature Cure
- Tack Free Surface
- Clear and Non-yellowing
- Excellent light transmittance

Adhesive used: Permabond UV683



LED Enclosure Bonding

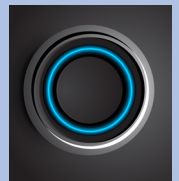
Application: Bonding Black Enclosures, and Buttons

Permabond 940 series are low odor, non-blooming cyanoacrylate adhesives. They form strong bonds to plastics with no white residue.

Benefits of Permabond cyanoacrylate adhesives:

- High Strength
- Low Odor
- Ambient Cure
- No Blooming (No Chlorosis)
- Easy Process
- Various Viscosity Grades Available

Adhesive used: Permabond 947



Lens Bonding

Application: Bonding glass and plastic lenses and covers

Permabond UV630 forms strong bonds quickly securing the plastic lenses. Permabond UV610 bonds glass lenses to metal fixtures.

Benefits of Permabond UV Cure Adhesives:

- Fast Room Temperature Cure
- Excellent Bond Strength to Plastic, Glass and Metal
- Good Shelf Life - No Refrigeration or Freezing Needed
- Non-flammable, Solvent Free

Adhesives: Permabond UV610 and UV630



Permabond
Engineering Adhesives

Typical Lighting Applications

Application Description	Grade	Type	Features	Temperature Resistance	Handling Time
Dome Coating	UV683	UV Cure	Fast, tack free, clear, non-yellowing protective coat which provides excellent light transmittance	-55 to +120°C -65 to +248°F	3.5 sec @ 33mW/cm2
Heat Sink	ES578	1-part Epoxy Heat Cure	Excellent thermal conductivity, electrically insulating	-40 to +180°C -40 to +355°F	30 min @ 150°C (300°F) (full cure)
Wire Tacking	268, CSA NF	Instant Adhesive Non-flammable Accelerator	Fast strong bonds to a variety of surfaces.	-55 to +80°C -65 to +180°F	10 sec
LED Strip Bonding	ET515	2-part Epoxy Room Temp Cure	Convenient dual cartridge with static mix nozzles bond flexible strip to a variety of surfaces	-40 to +80°C -40 to 176°F	25 min
	MS359 Clear	MS Polymer	One part moisture cure, excellent weather resistance	-40 to +100°C -40 to +212°F	20 min (skin over time)
Reflector Bonding	820	Instant Adhesive Room Temp Cure	Single component, high temperature resistant	-55 to +200°C -65 to +392°F	10 sec
Reflectors / Housing Bonding	920	Instant Adhesive Room Temp plus Secondary Heat Cure	Highest temperature resistant instant adhesive	-55 to +250°C -65 to +482°F	10 sec
Led Enclosures and On/Off Buttons	940 series	Instant Adhesives Room Temp Cure	Low odor, Non-blooming 940 wicking grade 7 cPs 941 30 cPs, 943 100 cPs 947 1200 cPs gap fill	-55 to +80°C -65 to +180°F	10 sec
LED Lens bonding	UV630, UV610	UV Cure	UV630 is ideal for bonding polycarbonate lenses and UV610 bonds glass to metal	-55 to +120°C -65 to +248°F	<5 sec @ 33mW/cm2 (full cure)

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Permabond Worldwide

Wherever your manufacturing or R&D site may be located, Permabond representatives can be called upon to assist you. We have an extensive network of trained distributors worldwide.

The information given and the recommendations made herein are based on our experience and are believed to be accurate. No guarantee as to, or responsibility for, their accuracy can be given or accepted, however, and no statement herein is to be treated as a representation or warranty. In every case we urge and recommend that purchasers, before using any product, make their own tests to determine, to their own satisfaction, its suitability for their particular purposes under their own operating conditions.

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Permabond's sales engineers are available to assess your production line and find the best possible turnkey adhesive solution that will result in production efficiencies.

The experienced team of Permabond chemists is on hand to help you with custom formulations and fulfilling your technical data requests.



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