Light-Curable Adhesives and Coatings for Infotainment Systems and In-Cabin Electronics

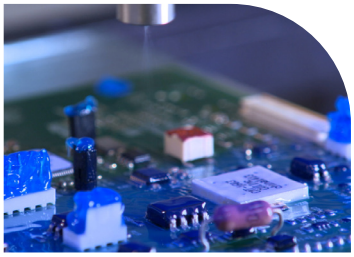
- Cures in just seconds upon exposure to UV/Visible light
- One-component materials with no added solvents
- Fluorescing materials available for easy inspection of coverage
- Products with excellent thermal shock, moisture, and corrosion resistance
- IPC, MIL, and UL listed conformal coatings available

As infotainment systems and in-cabin electronics become standard in most automobiles, manufacturers search for more efficient ways to increase production, reliability, and quality of these components. Dymax can provide manufacturers with the adhesive and coating solutions needed to meet these goals. Our light-curable adhesives and coatings are ideal for use in a variety of automotive systems including radios, GPS modules, satellite navigation, telematics boxes, as well as portable navigators, power audio, and car multimedia among others.

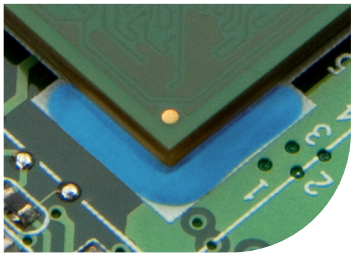
Dymax light-curable materials contain no solvents and are one-part, requiring no mixing or prep before application. They cure in seconds with light, enabling fast processing, greater throughput, and ultimately cost savings. Materials are available with many innovative and patented technologies that turn problems like shadow areas, cure confirmation, and difficult inspection into non-issues.

Available Light-Curable Materials

Conformal Coatings: Our conformal coatings contain no added solvents and protect printed circuit boards from thermal shock, heat, humidity, and corrosive elements to keep infotainment systems operating at their best. IPC approved, MIL-I-46058C and UL listed grades are available.

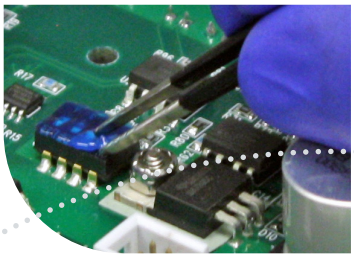


Edgebond & Potting Adhesives: Specifically formulated for applications where protection and ruggedization is required, Dymax edgebond and potting materials bond to a variety of substrates and printed circuit board materials. These adhesives cure in just seconds upon exposure to UV light. Grades formulated with secondary heat cure are also available for designs with shadow areas. These materials are also available in fluorescing grades to facilitate easy inspection and with color changing See-Cure technology to confirm cure.



Encapsulants: Dymax encapsulants protect critical electronic components throughout the infotainment systems. Standard grades cure in seconds with UV/Visible light, but secondary moisture- or heat-cure grades are also available for applications where shadow areas are a problem.

Maskants: SpeedMask® peelable electronic masks are designed for the masking of printed circuit board components prior to conformal coating application or wave solder and reflow processes. They cure in seconds "on-demand" when exposed to UV/Visible light. The fast cure allows boards to be immediately processed without the need for racking or waiting. The masks have low odor and require no special venting. The cured materials also leave no silicone, ionic contamination, or corrosive residues.



Product	UV/Visible Light	Heat	Moisture	Features	Viscosity, cP	Durometer Hardness	Tensile at Break, MPa [psi]	Modulus of Elasticity, MPa [psi]
Conformal Coatings								
9-20557	•	•		Flexible; blue fluorescing; excellent thermal shock performance; approvals: MIL-I-46058C, IPC-CC-830-B, UL 746, UL 94	2,300	D60	15.8 [2,300]	37.9 [5,500]
9483-Z	•		•	Excellent chemical and thermal shock resistance; good adhesion to PCB; flame retardant; bright blue fluorescing; great temperature/ humidity performance; approvals: MIL-I-46058C, IPC-CC-830-B, UL 746E, UL 94V-0	750	D60	10.3 [1,500]	480 [70,000]
Edgebond & Potting Adhesives								
9-911-REV-B	•	•		One-part potting material; high viscosity; solvent resistant; high bond strength to circuit board components; blue fluorescing	25,000	D80	24 [3,500]	552 [80,000]
921-GEL	•*	•		One-part; ideal for potting a wide variety of substrates including metal, glass, ceramic, and thermoset or filled plastics	25,000	D80	25 [3,640]	583 [84,650]
921-T	•*	•			3,000	D80	24 [3,600]	563 [82,000]
921-VT	•*	•			11,500	D80	22 [3,200]	540 [78,450]
9309-SC	•			Highly thixotropic reinforcement adhesive; See-Cure color-change technology; reduces stress on components; adheres to a variety of PCB substrates	45,000	D57	22 [3,200]	163 [23,800]
Encapsulants								
9014	•*		•	Flexible; blue fluorescing; room-temperature stable	18,000	A70	8.2 [1,200]	119 [17,300]
9037-F	•	•		Flexible; good moisture and thermal resistance; blue fluorescing	55,000	D40	5.8 [850]	6.2 [900]
9-20558-REV-A	•	•		High viscosity; thixotropic for minimal movement after dispense; flexible; bonds well to FPCs	20,000	D50	6.2 [900]	2.3 [340]
9001-E-V3.1	•	•		Moisture and thermal cycle resistance; good ionic and electrical properties	4,500	D45	5.2 [750]	17.2 [2,500]
Maskants								
9-20479-B-REV-A	•			Blue; peelable; compatible with gold and copper connector pins; silicone and halogen free	115,000	A75	3.37 [490]	4.13 [600]
9-7001-REV-A	•			Pink; peelable; compatible with gold and copper connector pins; resistance to solvent-based conformal coatings and primers; silicone and halogen free	42,000	A68	4.2 [609]	3.2 [464]

*UV only

Our Commitment to Greener, Safer Manufacturing

Dymax is committed to green manufacturing that reduces environmental impact, conserves energy, and provides greater worker safety. Over the last 40 years, our light-curable materials and curing equipment have become the industry standard for fast, environmentally conscious assembly. Dymax products are readily replacing technologies that contain hazardous ingredients, produce waste, or require higher amounts of energy to process.

Eco-friendly, one-component materials

Materials with no added solvents for improved worker and user safety

Fast curing products and equipment designed for less energy consumption

Dymax meets global statutory and regulatory requirements

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