

NO LIGHT?

No Problem!

HLC Hybrid Light-Curable Technology

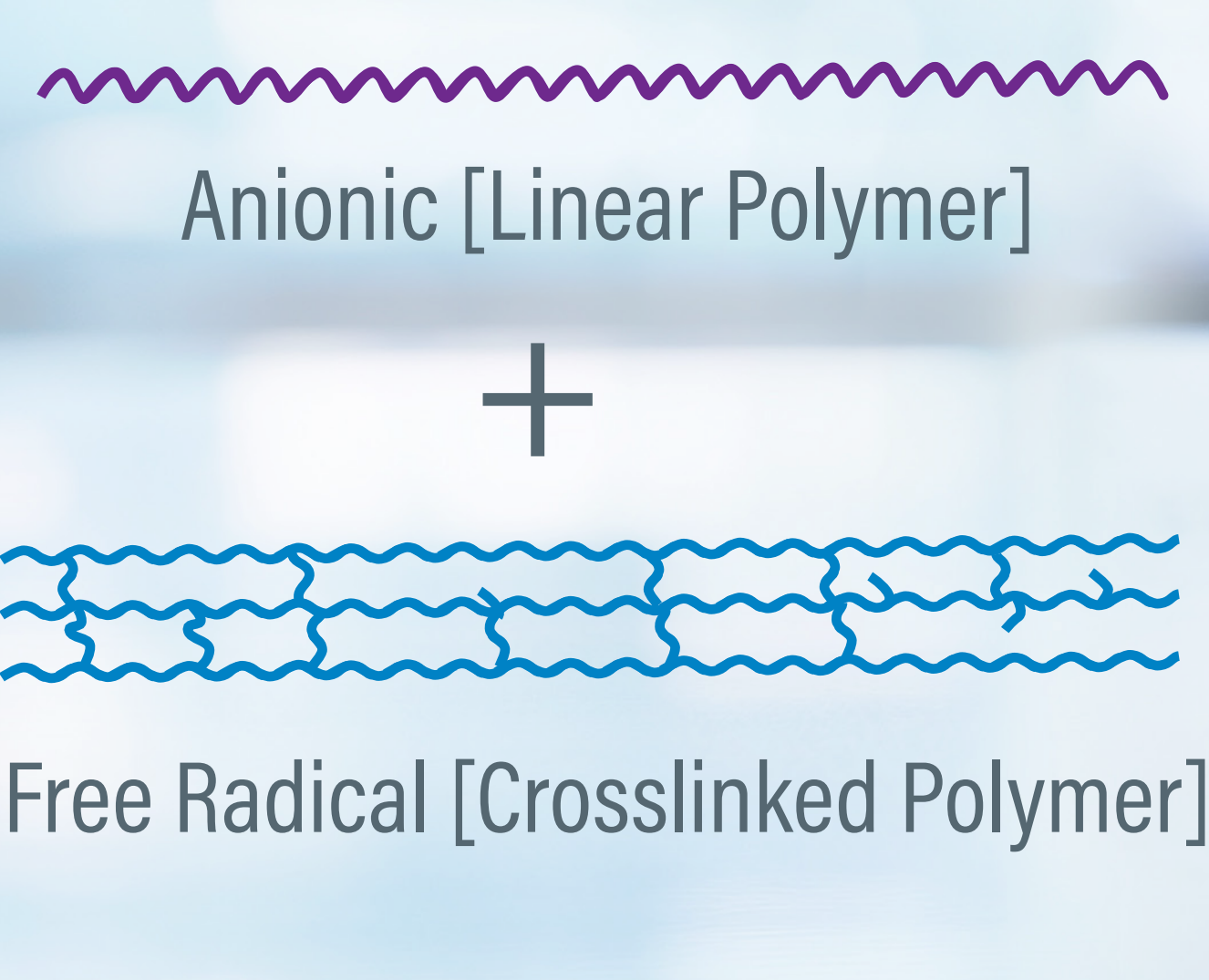
Dymax HLC™ adhesives cure with or without light, quickly bonding a wide range of materials, including opaque or light-blocking substrates.

Key Attributes

- ✓ Optimized for 405 nm LED curing, but is also cures fast and tack free with either LED or broad spectrum
- ✓ On-contact dark area cure capability
- ✓ Low to no blooming after proper light cure
- ✓ Cures with very low intensity (~20 mW/cm²)
- ✓ Heat and humidity resistance
- ✓ ISO 10993 compliant

The Chemistry Behind HLC

A revolutionary patent-pending adhesive platform, HLC technology combines the best qualities of anionic and free radical chemistries. HLC adhesives exhibit the exceptional physical and performance properties of Dymax light-curable adhesives and the rapid moisture/contact cure of anionics.



How Does HLC Compare to Similar Technologies?

	Dymax Light-Curable Material	Dymax HLC™ Material	Cyanoacrylate
Fast Cure Speeds	✓ Full cure in 1-30 sec.	✓ Light cure in 1-30 sec.; Non-light fixture in 5-75 sec.	Fixture only in 10-60 sec.
Tack-Free Surface Cure	Specific formulas only; Can require high-intensity light cure	✓ Tack free with low intensity light (20 mW/cm ²) <5 seconds	Specific formulas only; Requires use of activators
Open Time (Time Before Cure Begins)	✓ No cure until exposed to high-intensity light	10-30 seconds	10-30 seconds
Moisture Resistance	✓ Some with excellent moisture resistance	✓ Patented technology to increase moisture resistance	Not designed for high humidity or long-term moisture exposure
Temperature Resistance	✓ Can withstand greater temperature extremes or a broader range of temperatures	✓ Patented technology to increase temperature resistance	Not recommended for ≥225°F (107°C)
Opaque Substrate Bonding	Opaque substrates block UV and visible light	✓ Not an issue	✓ Not an issue
Impact Resistance	✓ Grades range from flexible to rigid	✓ Patented technology to reduce brittleness and increase impact resistance	Brittle with little impact resistance
UV/LED Light-Curing Equipment	Light-curing equipment required	✓ Equipment can be used to improve cure time and reduce crazing but not required for dark areas	✓ No equipment required
Gap Cure	✓ Typically recommended for 0.002"-0.25" (0.05-6.35 mm) with some formulas able to provide even larger gap curing	✓ Can accommodate close gaps or larger bond gaps with light cure	Requires close contact
Blooming	✓ Not an issue	✓ Low to no blooming after proper cure	Produces white haze around bond line during or after the cure
Stress Cracking	✓ Rarely an issue with proper cure	✓ Rarely an issue with proper cure	Tiny cracks in plastic can occur before or during the cure
Bondable Substrates	✓ Bonds dissimilar substrates	✓ Bonds dissimilar substrates	Does not typically bond dissimilar substrates



Dymax manufactures light-curable adhesives, coatings, and maskants, as well as compatible dispensing teams and curing equipment. We focus on creating materials that cure clean, green, and fast, helping engineering teams accomplish more in less time and with less negative impact on the environment.

www.dymax.com