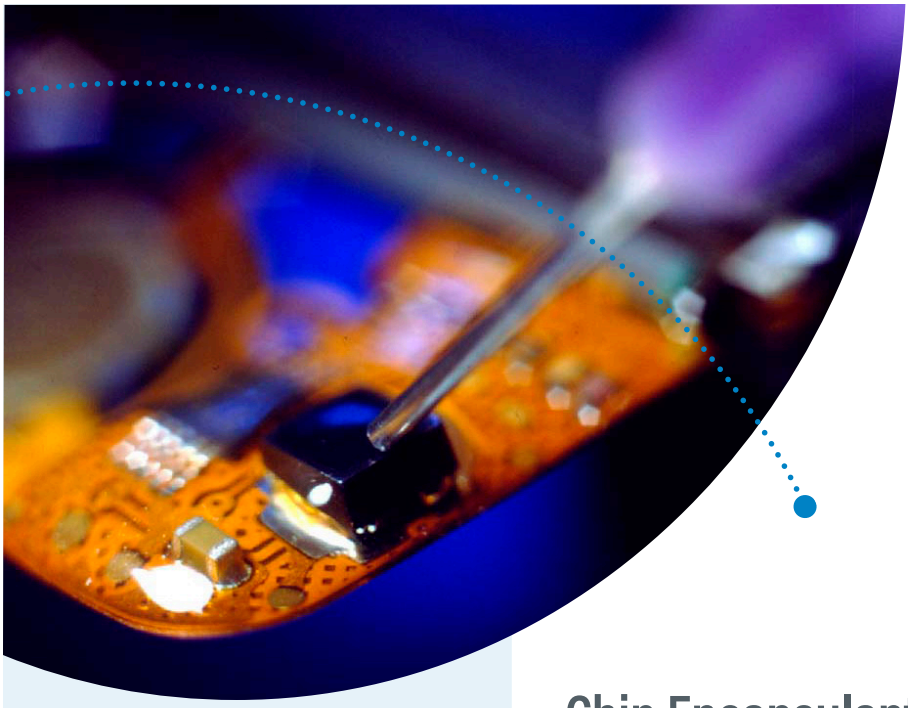


Chip Encapsulants

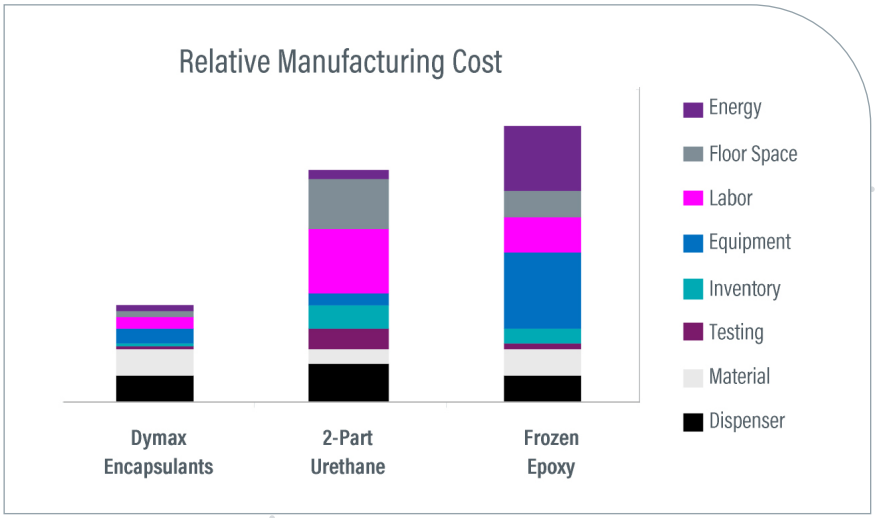
For Superior Protection on Flexible and Rigid Platforms

- Tack-free UV/Visible light cure in seconds
- Secondary moisture cure available for curing in shadow areas
- No solvents added
- High ionic purity
- Resistance to thermal shock and moisture
- Low stress under thermal cycle
- Electrically insulating
- Very low VOCs
- High coverage

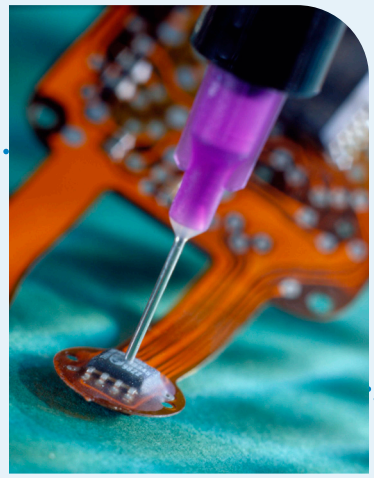
Dymax 9000-series encapsulants cure in seconds upon exposure to UV/Visible light and are easily incorporated into automated systems for maximizing microelectronic assembly and production speeds. These tough, flexible encapsulants have high ionic purity, resistance to humidity, and resistance to thermal shock to effectively protect components and improve their reliability. 9000-series single-component encapsulants contain no sharp, abrasive, mineral or glass fillers to abrade fine wires, and their combination of low Tg and low modulus means low stress. They have excellent adhesion to Polyimide, PET, flexible printed circuits, FR4, and ceramic boards and provide superior protection for glob top and chip-on-board applications. 9000-series encapsulants are also ideal for encapsulating ICs on flex circuits. The encapsulants are available in a wide range of viscosities, from thin to non-flowing gel, and several grades are formulated with secondary moisture cure to ensure the material cures in shadowed areas.

Cost Savings of Dymax Encapsulants

- Cure in seconds; increase throughput
- Minimal floor space requirements
- Simple to dispense
- Eliminate labor costs associated with complex dispensing system maintenance and manual transferring of parts for long cure



Product	UV/Visible Light	Heat	Moisture	Features	Nominal Viscosity, cP	Durometer Hardness	Modulus of Elasticity, MPa [psi]	Elongation at Break, %
9-20558-REV-A	•	•		Secondary heat cure; flexible; bonds well to FPCs	25,000	D38	7.3 [1,052]	196
9001-E-V3.0	•	•		Secondary heat cure; moisture and thermal cycling resistance; well suited for chip-on-board, chip-on-flex, and multi-chip modules	400	D45	7 [1,000]	200
9001-E-V3.1					4,500	D45	17 [2,500]	150
9008	•			Remains flexible at low temperatures; high moisture resistance	4,500	D35	45 [6,500]	270
9014	•		•	Secondary moisture cure for shadow areas; flexible; blue fluorescing	18,000	A70	119 [17,300]	63
9037-F	•	•		Secondary heat cure for shadow areas; flexible; blue fluorescing; moisture and thermal resistance	55,000	D40	6.2 [900]	110
9101	•		•	Secondary moisture cure for shadow areas; flexible; moisture and thermal resistant	7,000	D30-D50	17.5 [2,550]	38
9102					17,000		18.4 [2,670]	34
9103					25,000		17.6 [2,560]	36
9201-W	•		•	Secondary moisture cure for shadow areas; moisture, thermal, and impact resistance; high thixotropic index; IBOA free; wearable friendly	32,000	D14-D40	11.1 [1,614]	178
9209-W	•		•	Secondary moisture cure for shadow areas; LED curable; room-temperature reworkable; moisture, thermal, and impact resistance; high thixotropic index; IBOA free; wearable friendly	62,000	D38	48.9 [7,100]	221
9210-W	•		•	Secondary moisture cure for shadow areas; great performance during reliability testing; IBOA free; wearable friendly	29,000	D55-D75	561 [81,369]	28.2



Typical Ionic Content		
Extractable Chloride	<10 ppm	IC
Sodium	<10 ppm	ICP
Potassium	<10 ppm	AA
Fluoride	<10 ppm	IC

Curing Options for Dymax Encapsulants

Dymax encapsulants cure in seconds upon exposure to UV light, affording the fastest processing possible. Avoid processing bottlenecks by choosing an efficient and cost-effective Dymax encapsulant with a matched Dymax UV light-curing system.

DYMAX®

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