Polyurethane (PU) Adhesives In Electronics - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

Market Report | 2026-01-16 | 120 pages | Mordor Intelligence

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Report description:

Polyurethane (PU) Adhesives In Electronics Market Analysis

Polyurethane Adhesives In Electronics market size in 2026 is estimated at USD 1.31 billion, growing from 2025 value of USD 1.25 billion with 2031 projections showing USD 1.68 billion, growing at 5.00% CAGR over 2026-2031. This steady expansion rests on the growing importance of high-performance bonding materials for electric-vehicle (EV) battery packs, the continuing miniaturization of consumer devices, and stricter safety regulations that favor low-emission chemistries. Vendors are prioritizing rapid-cure, precision-dispense technologies that help shrink production tact times, especially in high-volume Asian factories. Investments in thermally conductive and UV-curing chemistries are accelerating as designers confront higher power densities in power modules and automotive inverters. Cost volatility for polyols and diisocyanates remains a headwind, yet strong downstream demand, particularly from flexible-hybrid electronics, keeps overall momentum positive.

Global Polyurethane (PU) Adhesives In Electronics Market Trends and Insights

Miniaturization of Consumer Devices Boosting Demand for Low-Viscosity Potting Adhesives

Wearables, hearables, and IoT sensors continue to shrink, leaving little room for mechanical fasteners. Designers therefore rely on ultra-low-viscosity polyurethane formulations, often below 1,000 cPs, that flow into 150 □m gaps without void creation. These materials encapsulate fragile chips, mitigate vibration, and survive -55 C to 100 C thermal cycles, as demonstrated by Protavic's PNU-46202 series. Sharp reductions in part counts cut assembly costs, which reinforces demand for high-function potting

chemistries across the polyurethane adhesives in the electronics market. Asian outsourced-assembly providers are specifying the new grades in volume because they enhance first-pass yields and reduce rework. Over the medium term, growing adoption in augmented-reality headsets will magnify the positive CAGR contribution.

EV Battery Thermal-Gap Fillers Based on Thermally Conductive Polyurethane

Battery packs now carry up to 100 kWh of energy, making thermal runaway avoidance a design priority. Thermally conductive polyurethane adhesives dissipate heat while electrically insulating cells, combining two critical functions in a single dispense step. Dow's carbon-nanotube-enhanced formulations achieve 5 W/m□K conductivity with sub-0.5% shrinkage, reducing pack stresses and extending cycle life. As EV adoption accelerates, tier-one suppliers are locking in multiyear supply contracts, ensuring that this driver delivers the highest incremental growth within the polyurethane adhesives in electronics market.

VOC and Isocyanate Exposure Regulations Tightening Globally

EPA and REACH frameworks now cap indoor formaldehyde at 0.062 mg/m□ and mandate operator training for diisocyanate handling. Smaller EMS companies face compliance investments topping USD 250,000 for fume extraction and certification, pushing them toward alternative chemistries. Separate SKUs for different jurisdictions raise inventory costs, slowing new-product introductions. Although major suppliers are unveiling low-monomer grades, qualification cycles stretch six to nine months, dampening near-term orders in the polyurethane adhesives in the electronics market.

Other drivers and restraints analyzed in the detailed report include:

Environmental Push Toward Water-Borne, Low-VOC Polyurethane DispersionsFlexible-Hybrid Electronics Needing Stretchable, Self-Healing BondsPolyol and Diisocyanate Price Volatility Pressuring Margins

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Surface-flash curing polyurethane formulations commanded 63.73% revenue in 2025, a position they are set to strengthen by expanding at 5.30% CAGR to 2031. This leadership underscores how the polyurethane adhesives in the electronics market benefit when assembly lines slash dwell times from minutes to seconds. Many contract manufacturers now operate inline UV tunnels that cure 50 □m bond lines in under two seconds, delivering cycle-time savings near 30%. The rapid-cure feature also minimizes fixturing, which simplifies automated dispensing on densely populated boards.

Electrically conductive and thermally conductive variants round out the portfolio. Although they trail in volume, they capture above-average margins by solving mission-critical challenges such as thermal spreading in LED arrays or grounding paths in camera modules. Hybrid dual-cure chemistries that combine UV initiation with secondary moisture curing address shadowed joints, broadening the reachable share of the polyurethane adhesives in the electronics market. Emerging heat-activated products remain niche but draw interest in foldable displays that cannot tolerate high peak irradiance.

The Polyurethane Adhesives in Electronics Report is Segmented by Product Type (Electrically Conductive PU Adhesive, Thermally Conductive PU Adhesive, and More), Application (Surface Mounting, Conformal Coatings, Wire Tacking, Potting, Encapsulation, and Other Applications), and Geography (Asia-Pacific, North America, Europe, South America, and Middle-East and Africa). The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

Asia-Pacific dominated with 72.60% revenue share in 2025 on the back of China's unmatched PCB, smartphone, and EV-battery output. Factory clusters in Shenzhen and Shanghai consume high-throughput UV grades that cure under conveyor-belt UV LEDs in less than three seconds, reinforcing regional scale advantages. South Korea's semiconductor fabs drive consumption of thermally conductive polyurethane interfaces that cope with 450 W chip heat-flux densities.

North America is buoyed by EV battery production in Michigan, Tennessee, and Ontario, which is fueling orders for 2 W/m□K gap fillers, while aerospace primes in Washington and Texas specify low-density syntactic polyurethane potting compounds that shave grams from satellite control boards. Regulatory rigor, EPA VOC limits, and OSHA-dictated exposure thresholds make water-borne dispersions more popular, positioning local formulators that pivot early for share gains in the polyurethane adhesives in electronics market.

Europe shows balanced growth tied to automotive electrification targets. The German premium-car segment increasingly specifies polyurethane structurals that provide impact resistance for battery enclosures. Meanwhile, REACH Annex XVII limits on free monomer diisocyanates push OEMs to new micro-emission chemistries. Emerging clusters in Poland and Hungary, supplied by Asian EMS players, are likely to raise Eastern European consumption through 2030. Middle-East and Africa, and South America remain nascent, but rising handset assembly in Vietnam-backed African ventures hints at longer-term upside.

List of Companies Covered in this Report:

3M Arkema Ashland Avery Dennison Corporation BASF Covestro AG DELO Industrie Dow Dymax Epic Resins H.B. Fuller Company Henkel AG & Co. KGaA Huitian New Materials Huntsman International LLC. INTERTRONICS ITW Performance Polymers Kangda New Materials (Group) Co., Ltd Master Bond Parker Hannifin Corp Permabond Sika AG

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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