

Adhesives_Sealants

Weekly Intelligence Report

2026-08-30 | 31 articles | 10 countries

troy-technical.jp

This Week's Keyword

Next-Gen Bonding

Driving EV, AI, & Circular Economy

31

articles

Total Articles Analyzed

10

countries

Source Countries/Regions

3

minutes

Bone Repair Time (#07)

45

°C

Ultra-Low Cure Temp (#15)

All 31 Articles This Week — 5-Axis Evaluation Matrix

How to read columns — Tech Novelty: degree of breakthrough Market Proximity: closeness to commercialization Market Impact: industry-wide effect Data Reliability: quantitative data & peer review US/EU Relevance: direct impact on US/European companies & supply chains

#	Article Title	Type	Tech Novelty	Market Proximity	Market Impact	Data Reliability	US/EU Relevance	Summary
#01	Henkel Technomelt AS	New Product						Henkel's new hot-melt adhesive prevents roof tile transport damage, reduces energy consumption.
#02	IMCD Bio-Based HMA	New Product						IMCD showcases bio-based hot-melt adhesives for sustainable packaging at WAC 2026.
#03	Kootai EV Potting	New Product						Kootai Chemicals offers silicone potting compounds for EV battery thermal management, safety.
#04	Conagen Debondable HMA	New Product						Conagen launches bio-based debondable hot melt adhesives for EV/electronics recycling and repair.
#05	Henkel Teroson EP 52	New Product						Henkel's epoxy structural adhesive for automotive BiW enables lightweighting and vibration damping.
#06	H.B. Fuller EternaBond	New Product						H.B. Fuller's EternaBond® Dry Technology System improves RV watertightness and production speed.
#07	Bone-02 Bio-adhesive	Research						Chinese researchers develop oyster-inspired bio-adhesive for 3-minute bone repair, eliminating surgery.
#08	LiPAA Electrode Adhesive	Research						Norwegian/Austrian researchers discover LiPAA, a novel electrode adhesive extending Li-ion battery life.
#09	Koh Young Packaging Tech	New Product						Koh Young unveils advanced measurement technologies for AI, chiplet, and thermal management packaging.
#10	Valence EVA HMA	New Product						Valence Bonding Technology enhances EVA hot melt adhesives for China's high-speed automated production.
#11	AI Panel-Based Pkg	Trend Article						AI advancements drive new panel-based semiconductor packaging, surpassing silicon interposer limits.
#12	HBM Thermal Mgmt	Analysis						SK hynix's MR-MUF and Samsung's TC-NCF revolutionize thermal management in AI semiconductor HBM.
#13	YINCAE Optical Underfill	New Product						YINCAE unveils UF 88UV optical underfill with near 100% transparency for advanced semiconductor packaging.

#	Article Title	Type	Tech Novelty	Market Proximity	Market Impact	Data Reliability	US/EU Relevance	Summary
#14	Cyclomer 'D-glue'	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Cyclomer unveils 'D-glue' debondable adhesive, improving plastic recovery from electronics via heat.
#15	DELO Ultra-Low Temp	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	DELO unveils ultra-low temperature curing adhesives (45°C) for consumer electronics, boosting productivity.
#16	Nordson ASYMTEK XL	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Nordson unveils ASYMTEK Vantage® XL fluid dispensing system for panel-level packaging, boosting AI/HPC yield.
#17	China PVC Film	Market Overview	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	China's top PVC film makers drive interior decoration with water-based acrylic adhesive technology.
#18	3M & BOE Joint Lab	Corporate Strategy	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	3M and BOE establish joint lab to accelerate display innovation, focusing on 'wrinkle-free' foldable displays.
#19	tesa 4563 Tape	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	tesa introduces 'tesa 4563' adhesive tape for industrial roller wrapping, with anti-adhesion/slip properties.
#20	Chase Acquires Hylomar	Corporate Strategy	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Chase Corporation acquires Hylomar Holdings, bolstering specialty sealants and adhesives for industrial/aerospace.
#21	FTC Blocks Henkel Deal	Corporate Strategy	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	US FTC blocks Henkel's \$725M acquisition of Liquid Nails to preserve competition in construction adhesives.
#22	Epsilon Adv Pkg Mat	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	Epsilon unveils Die Attach Copper Paste and EMI shielding for AI data center semiconductor packaging.
#23	H.B. Fuller Rejects	Corporate Strategy	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	H.B. Fuller Board rejects Ancora's acquisition proposal for Building Adhesives Solutions, citing undervaluation.
#24	Dymax UV/LED Curing	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Dymax showcases UV/LED curing adhesives for battery/electronics and expands HLC medical portfolio.
#25	Olin & Huntsman Merger	Corporate Strategy	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Olin and Huntsman shareholders approve all-stock merger to form 'OlinHuntsman,' enhancing global competitiveness.
#26	Indium SiC Sintering	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Indium Corp. unveils high-reliability power device packaging solutions, including SiC and Cu sintering pastes.
#27	Chase Acquires Hylomar	Corporate Strategy	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Chase Corporation acquires UK-based Hylomar, bolstering its specialty sealant and adhesive portfolio.
#28	Dymax Medical Wearables	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Dymax unveils '2000-MW Series' UV-curable adhesives for medical wearables, IBOA- and TPO-free.
#29	Henkel Technomelt AS	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	Henkel develops 'Technomelt AS 4004' hot-melt adhesive to prevent damage during roof tile transportation.
#30	Incure Optik™ HTE	New Product	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	Incure unveils 'Optik™ HTE-6486' dual-cure UV optical adhesive for stable optical alignment and reliability.
#31	US FTC Blocks Henkel	Corporate Strategy	●●●●○	●●●●○	●●●●○	●●●●○	●●●●●	US FTC wins court battle, blocks Henkel's proposed \$725M acquisition of Liquid Nails.

●●●●○ High ●●●●○ Med-High ●●●●○ Med ●●●●○ Low | Yellow highlight = featured article

Three Questions That Demand Your Decision This Week

❶ Is your EV battery platform future-proof?

Breakthroughs like LiPAA (#08) and advanced potting compounds (#03) are fundamentally extending battery life and safety. Does your current battery design and material sourcing strategy account for these next-gen adhesive chemistries, or are you at risk of being outpaced by competitors leveraging these innovations?

❷ How will advanced packaging adhesives impact your AI roadmap?

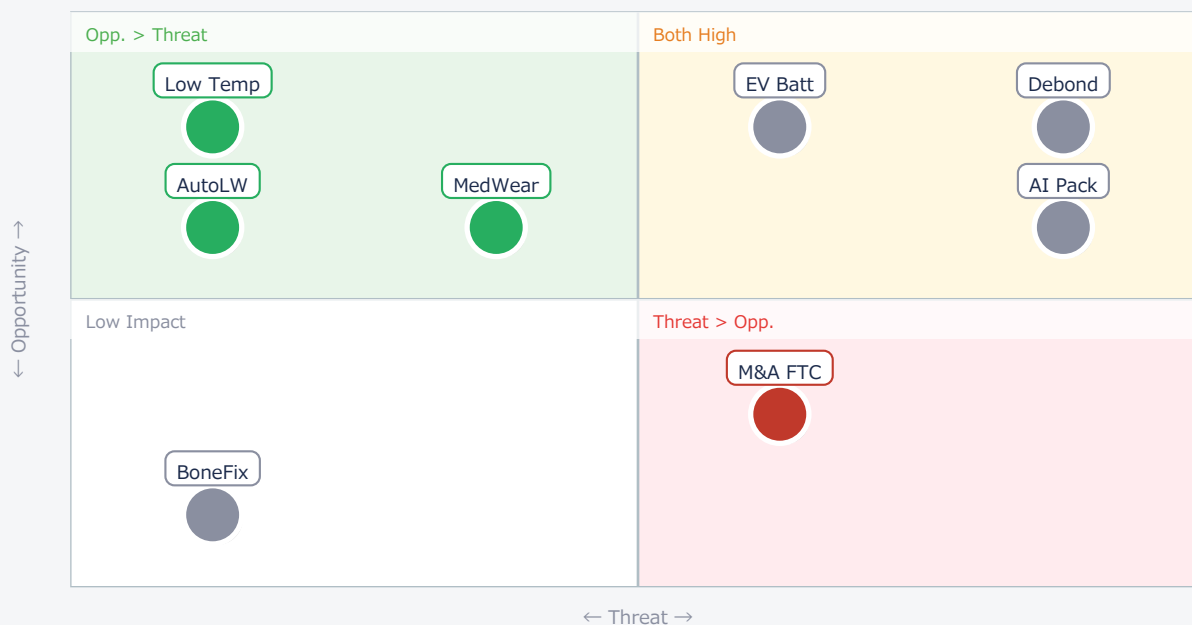
With panel-level packaging (#11) and HBM thermal management (#12) becoming critical for AI/HPC, new underfills (#13) and dispensing systems (#16) are essential. Are your R&D; and procurement teams actively evaluating these materials and equipment to ensure your next-gen AI chips meet performance and reliability targets?

❸ Are you prepared for the circular economy's adhesive demands?

Bio-based debondable adhesives (#04, #14) are emerging as key enablers for recycling and repair in electronics and EVs. Is your product design incorporating these reversible bonding solutions to meet upcoming sustainability regulations and consumer demand for repairable, recyclable products, or will your offerings become obsolete?

Opportunities vs. Threats for US/European Companies

Opportunity vs. Threat Matrix for US/European Companies



Item	Quadrant	↑ Opportunity	↓ Threat
● Debond	Critical	Circular economy, repair	Obsolete current tech
● EV Batt	Critical	EV performance, safety	Lagging battery tech
● AI Pack	Critical	AI chip enabler	Missed market share
● Low Temp	Opp.	Prod efficiency, cost	Competitor lead
● MedWear	Opp.	Patient safety, new apps	Regulatory hurdles

● M&A; FTC	Threat	Market stability	Blocked growth
● BoneFix	Ref.	Future medical tech	Long R&D; cycle
● AutoLW	Opp.	Vehicle performance	Incumbent displacement

Deep Dive ① — LiPAA: Extending Li-ion Battery Life

#08 | 2026/08/20 | (No explicit source) | Tech Novelty ●●●●● Proximity ●○○○○ Market Impact ●●●●● Data Reliability ●●●○○ US/EU Relevance ●●●●●

Norwegian/Austrian researchers discovered Lithiated Polyacrylate (LiPAA), a novel electrode adhesive that significantly extends the life of high-voltage lithium-ion batteries by neutralizing hydrofluoric acid and retaining leached metals from the cathode.

LiPAA's water solubility also enables more environmentally friendly electrode manufacturing, simplifying processes and reducing costs, positioning it as a key material for next-generation battery performance and sustainability.

► Strategic Analyst's Perspective

Strategic Analyst's Perspective: The published numbers are highly promising, representing an academic breakthrough. However, commercialization is 5+ years away, as scale-up manufacturing and performance validation across diverse battery chemistries are significant technical barriers. [Opportunity] for US/EU materials suppliers to partner with research institutions for early licensing or joint development, securing IP in critical battery components. [Threat] for existing battery manufacturers if they fail to integrate such advanced materials, risking competitive disadvantage in battery lifespan and safety. Next actions: [R&D;] Initiate exploratory research partnerships with NTNU/AIT or similar labs by Q4 2026. [Strategy] Assess long-term battery material roadmaps to incorporate novel binders by Q1 2027.

Deep Dive ② — Ultra-Low Temperature Curing Adhesives

#15 | 2026/08/20 | DELO News | Tech Novelty ●●●●○ Proximity ●●●●○ Market Impact ●●●●○ Data Reliability ●●●●○ US/EU Relevance ●●●●●

DELO has introduced a new generation of adhesives (DUALBOND LT series) enabling ultra-low temperature (SLT) curing from just 45°C for consumer electronics assemblies, significantly reducing thermal stress on delicate components.

These adhesives achieve rapid curing (10 min at 60°C or 1 hr at 45°C), boosting productivity by allowing inline heat tunnels instead of batch ovens, setting a new standard for electronics manufacturing efficiency and component protection.

► Strategic Analyst's Perspective

Strategic Analyst's Perspective: The stated curing temperatures and times are realistic and represent a significant improvement over conventional methods, addressing a critical pain point for heat-sensitive electronics. Technical barriers are minimal as it's a product launch. [Opportunity] for US/EU electronics OEMs to significantly reduce manufacturing costs, improve yield, and enable new designs with heat-sensitive components. [Threat] for competitors still relying on higher-temperature curing, risking efficiency and quality lag. Next actions: [Procurement] Evaluate DELO DUALBOND LT series for immediate integration into existing and new product lines by Q4 2026. [R&D;] Explore design possibilities for thinner, more delicate devices enabled by this lower temperature processing by Q1 2027.

Deep Dive ③ — Thermal Management in AI Semiconductor HBM

#12 | 2026/08/22 | USD Analytics | Tech Novelty●●●●○ Proximity●●●●○ Market Impact●●●●● Data Reliability●●●●○ US/EU Relevance●●●●○

SK hynix's Advanced MR-MUF and Samsung's TC-NCF technologies are revolutionizing thermal management in AI semiconductor HBM, resolving critical heat dissipation and warpage issues in high-density stacks.

MR-MUF uses advanced epoxy molding compounds for efficient heat channeling, while TC-NCF manages warpage for thinner dies, both crucial for high yield and reliability in complex heterogeneous integration for AI/HPC.

► Strategic Analyst's Perspective

Strategic Analyst's Perspective: The advancements by SK hynix and Samsung are critical and appear realistic given the intense R&D; in HBM. The technical barriers are primarily in process integration and material optimization for even higher stacks. [Opportunity] for US/EU materials suppliers to develop next-gen epoxy molding compounds and non-conductive films that surpass current capabilities, becoming key partners for these leading memory manufacturers. [Threat] for US/EU semiconductor packaging firms if they cannot match or exceed these thermal management capabilities, risking being locked out of advanced AI chip production. Next actions: [R&D;] Investigate material science for improved thermal conductivity and warpage control in underfills/films by Q4 2026. [Business Dev] Engage with SK hynix/Samsung to understand their future material needs for HBM4+ by Q1 2027.

Other Notable Articles

Conagen Launches Bio-Based Debondable Hot Melt Adhesives (Indian Chemical News)

Tech Novelty●●●●○ Proximity●●●●○ Market Impact●●●●○

Bio-based debondable HMAs enable recycling/repair in EV/electronics, crucial for circular economy initiatives.

Indium Corporation to Unveil High-Reliability Power Device Packaging Solutions, Including SiC and Cu Sintering Pastes, at PCIM Asia 2026 (Indium Corporation)

Tech Novelty●●●●○ Proximity●●●●○ Market Impact●●●●○

New SiC and Cu sintering pastes enhance thermal management and reliability for power electronics in EVs and renewables.

YINCAE Unveils UF 88UV Optical Underfill with Near 100% Transparency for Advanced Semiconductor Packaging, Enhancing Inspectability (openPR.com / YINCAE Advanced Materials, LLC)

Tech Novelty●●●●○ Proximity●●●●○ Market Impact●●●●○

High-transparency, fluorescent underfill improves inspection and performance for optoelectronic/semiconductor packaging.

Henkel Introduces Teroson EP 52 Series Epoxy Structural Adhesive for Automotive Body-in-White Production: Enabling Lightweighting and Vibration Damping (Assembly Magazine)

Tech Novelty●●●●○ Proximity●●●●○ Market Impact●●●●○

Structural adhesive for automotive BiW offers lightweighting and vibration damping, reducing need for traditional methods.

Recommended Actions This Week

Action recommendations based on article evaluation matrix and opportunity/threat analysis.

■ Immediate (this week)

- [Executive] Review M&A; pipeline for antitrust risks, especially in concentrated markets, following FTC's aggressive stance (#21, #31).
- [Procurement] Contact DELO to evaluate DUALBOND LT series for heat-sensitive electronics assembly to gain immediate efficiency benefits (#15).
- [R&D;] Initiate internal review of current EV battery adhesive strategies against new thermal management and lifespan solutions like Kootai's potting compounds (#03).

■ Short-term (1 month)

- [R&D;] Task materials science teams to investigate bio-based debondable adhesive technologies for future product design, focusing on Conagen and Cyclomer's offerings (#04, #14).
- [Strategy] Assess competitive landscape in advanced semiconductor packaging materials, particularly for AI/HPC, to identify gaps against SK hynix, Samsung, Epsilon, and Indium (#12, #22, #26).
- [Business Dev] Explore partnerships or licensing opportunities with research institutions (e.g., NTNU/AIT) developing breakthrough battery materials like LiPAA (#08).

■ Medium-long term (quarter+)

- [R&D;] Establish a dedicated task force to develop or integrate advanced thermal management solutions for next-gen AI/HPC packaging, including underfills and sintering pastes (#12, #13, #26).
- [Legal/IP] Conduct a comprehensive IP landscape analysis for bio-based and debondable adhesives to inform long-term product development and market entry strategies (#04, #14).
- [Strategy] Develop a roadmap for integrating circular economy principles into product design, prioritizing materials that enable repair, reuse, and recycling across all product lines.

troy-technical.jp/en | Original curation. Article copyrights belong to respective authors. | Gemini API + Claude | 2026-08-30

Adhesives_Sealants — Selected Articles

Date: 2026-08-30

Articles: 31

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- #16 Nordson Electronics Solutions Unveils ASYMTEK Vantage® XL Fluid Dispensing System for Panel-Level Packaging at SEMICON Taiwan 2026, Boosting Throughput and Yield for AI/HPC Chips
- #17 China's Top 5 Self-Adhesive PVC Film Manufacturers Drive Interior Decoration Innovation with Water-Based Acrylic Adhesive Technology for Furniture and Wall Surfaces
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#01 Henkel Unveils Technomelt AS 4004 Hot-Melt Adhesive: Low Processing Temperature Solution Prevents Roof Tile Transport Damage

Published August 26, 2026 SpecialChem Germany



OVERVIEW

Henkel has launched Technomelt AS 4004, a new polypropylene-based hot-melt adhesive designed to prevent transport damage on roof tiles. This adhesive operates at a lower processing temperature than traditional polyamide-based spacer adhesives, leading to reduced energy consumption and maintenance costs. By directly protecting tile surfaces during stacking, it eliminates the need for manual insertion of protective materials, significantly enhancing production efficiency and product integrity during transit.

Key Findings

Henkel has introduced Technomelt AS 4004, a novel polypropylene-based hot-melt adhesive specifically formulated to prevent transport damage to roof tiles. This innovative solution offers significant advantages in terms of processing efficiency and cost reduction for the roof tile manufacturing industry.

Technical / Clinical Details

Technomelt AS 4004 is distinguished by its significantly lower processing temperature compared to older polyamide-based spacer adhesives. This attribute directly translates into reduced energy consumption and lower maintenance costs within palletizing lines. The adhesive functions by directly protecting the tile surfaces during stacking, thereby eliminating the need for manual insertion of separator materials, a common practice in the past. After curing, the adhesive can be easily removed at the destination without leaving residues, ensuring the pristine condition of the tiles. This technology improves both product quality and accelerates the automation of production lines.

Background & Context

Historically, the transportation of roof tiles has been plagued by risks of product damage due to vibrations and impacts, necessitating labor-intensive manual processes or additional buffering materials. These methods contributed to increased production costs and inefficiencies in logistics. As a global leader in adhesives and sealing solutions, Henkel has focused on developing high-performance, energy-efficient solutions to address these critical industry challenges. Technomelt AS 4004 emerges from this strategic focus, offering a sustainable and efficient solution to existing market needs.

Strategic Significance & Outlook

The implementation of Technomelt AS 4004 holds potential applications beyond roof tiles, extending to other building materials and delicate products requiring secure transport. The reduction in processing temperature is a vital factor in mitigating operational costs, especially in the context of rising energy prices. Henkel aims to support its customers in achieving their environmental sustainability goals and to enhance overall supply chain efficiency and sustainability through this product. Future research and development are anticipated to further optimize its environmental performance and debonding characteristics, potentially setting new standards in material handling and protection.

Source: <https://www.specialchem.com/adhesives/news/new-henkel-hot-melt-adhesive-targets-transport-damage-on-roof-tiles>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#02 IMCD to Unveil Adhesives & Sealants Portfolio at WAC 2026, Highlighting Innovations in Bio-Based Hot-Melt Adhesives

Published August 24, 2026 SpecialChem ヨーロッパ



OVERVIEW

At WAC 2026, IMCD will unveil its comprehensive adhesives and sealants portfolio, spotlighting advanced raw materials alongside a key presentation on bio-based hot-melt adhesives. This initiative underscores the development of sustainable, high-performance formulations for packaging, crucial for an industry transitioning towards environmentally conscious solutions while maintaining stringent performance demands.

Background

The adhesives and sealants industry is experiencing a profound transformation, propelled by escalating environmental consciousness and more rigorous regulatory landscapes. The packaging sector, in particular, is under considerable pressure to enhance recyclability and incorporate bio-based materials into its product designs. WAC 2026 stands as a crucial international platform for showcasing the latest technological advancements and emergent trends in this domain, with industry leaders like IMCD presenting their innovative solutions. IMCD's overarching strategy centers on delivering bespoke solutions that precisely address specific customer requirements, thereby securing a competitive advantage in a dynamically evolving market.

Key Findings

IMCD is poised to showcase its comprehensive adhesives and sealants portfolio at the World Adhesive & Sealant Conference and EXPO (WAC 2026). A central theme will be the development of sustainable, bio-based hot-melt adhesives specifically engineered for packaging applications. This strategic emphasis highlights IMCD's dedication to achieving a critical balance between superior performance and a reduced environmental footprint within a vital industrial sector.

Technical Details

The IMCD exhibition will spotlight a diverse array of foundational raw materials crucial for advanced adhesive and sealant formulations. This encompasses cutting-edge resins, specialized additives imparting unique functional properties, functional fillers engineered for enhanced strength and durability, and novel performance improvers. A cornerstone of the event will be a presentation by an IMCD technical manager titled 'The Development of Bio-Based Hot-Melt Adhesives for Packaging.' This session will explore pioneering technologies that leverage sustainable biomass-derived feedstocks to deliver adhesive strength, heat resistance, and processing characteristics that rival, or even surpass, those of conventional petroleum-based alternatives. These innovations are particularly vital for sectors like food packaging and consumer goods, enabling manufacturers to meet increasingly stringent environmental regulations without sacrificing production efficiency.

Strategic Significance & Outlook

The bio-based hot-melt adhesive technology slated for presentation by IMCD at WAC 2026 possesses significant potential to accelerate the global adoption of sustainable packaging solutions. This represents a pivotal stride towards achieving a true circular economy, where environmental impact is meticulously minimized across the entire product lifecycle. Looking ahead, IMCD is committed to intensifying its research and development efforts, with the objective of integrating enhanced adhesive and sealant performance with superior environmental profiles. This proactive approach will empower the company to continue assisting its clientele across diverse industrial sectors in navigating and overcoming complex challenges. The technology is projected to garner substantial demand, particularly within European and North American markets, which are increasingly prioritizing eco-friendly products, thereby serving as a powerful catalyst for industry-wide decarbonization.

Source: <https://www.specialchem.com/adhesives/news/imcd-presents-adhesives-and-sealants-portfolio-at-wac-2026>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#03 Kootai Chemicals Enhances EV Battery Thermal Management and Protection with Silicone Potting Compounds, Mitigating Thermal Runaway Risks

Published August 27, 2026 Facebook (Kootai Chemicals) China



OVERVIEW

Kootai Chemicals is offering advanced silicone potting compounds to strengthen thermal management and physical protection in EV battery packs. These low-viscosity materials uniformly fill air voids between battery cells, ensuring efficient heat dissipation and absorbing thermal expansion, thereby effectively reducing thermal runaway risks. The compounds provide robust dielectric insulation, vibration absorption, and environmental sealing, significantly extending battery lifespan and enhancing safety.

Key Findings

Kootai Chemicals is enhancing its high-performance silicone potting compound solutions for electric vehicle (EV) battery packs, focusing on superior thermal management and physical protection. These materials are crucial for mitigating thermal runaway risks and safeguarding battery components from harsh environmental stressors like vibration, moisture, and electrical stress.

Technical / Clinical Details

Kootai Chemicals' silicone potting compounds feature extremely low viscosity, enabling deep and uniform penetration into minute gaps and voids around battery cells and circuitry. This ensures efficient heat distribution throughout the battery pack, preventing localized hot spots. Once cured, the compound transforms into a flexible elastomer that effectively absorbs thermal expansion and vibrations generated during battery charge-discharge cycles, thus reducing mechanical stress on solder joints and other delicate components. Furthermore, the material provides excellent dielectric insulation, minimizing the risk of electrical shorts in high-voltage battery systems operating at 800V or higher. The compounds meet critical safety standards such as UL94 flame retardancy and are halogen-free, protecting battery packs from moisture, dust, and chemical ingress in applications ranging from EVs to industrial battery systems and e-bikes.

Background & Context

With the rapid expansion of the EV market, battery pack safety and reliability have become paramount design requirements. Thermal runaway, in particular, poses a severe safety threat to EVs, driving increased demand for effective thermal management and protective materials. Beyond traditional cooling plates, thermal interface materials (TIMs), and gap fillers, potting materials offer a crucial layer of protection by encapsulating battery cells. Kootai Chemicals, with its extensive experience and technological expertise in this field, has been developing innovative materials to meet these stringent market demands. Developments like SkyBoys' Aerogel Fiberglass Automotive Battery Thermal Barrier and Xydar® LCP G-330 HH for high-temperature resistance further underscore the growing importance of advanced thermal management in this sector.

Strategic Significance & Outlook

Kootai Chemicals' silicone potting technology is poised to be an indispensable element in shaping the future of battery design for EVs and other New Energy Vehicles (NEVs). As an integrated solution for thermal management, mechanical protection, and electrical insulation, it will contribute to enhancing the safety and performance of increasingly dense and powerful next-generation battery systems. The company aims to continue its R&D efforts to improve thermal conductivity, reduce weight, and enhance compatibility with automated dispensing systems, thereby streamlining battery manufacturing processes and reducing costs. This approach also indirectly contributes to extended battery lifespan and improved recyclability, accelerating the realization of sustainable mobility.

Source:

[illegible]

#04 Conagen Launches Bio-Based Debondable Hot Melt Adhesives: Enabling Recycling and Repair in EV and Electronics Industries

Published Date unknown Indian Chemical News India



OVERVIEW

Conagen has developed and launched bio-based debondable hot melt adhesives utilizing sustainable biomolecules. These innovative adhesives offer high-strength bonding while providing reversibility upon heating, facilitating effortless repair, component recovery, and recycling across industries like automotive (including EVs), consumer electronics, and appliances. This technology aims to significantly reduce waste and manufacturing costs, promoting a circular economy.

Key Findings

Conagen has launched groundbreaking bio-based debondable hot melt adhesives (HMAs) derived from sustainable biomolecules. This new technology delivers robust bonding capabilities coupled with the unique feature of reversible debonding upon heating, drastically improving product repairability, component recovery, and recycling processes across various industries.

Technical / Clinical Details

Conagen's debondable HMAs exhibit high-performance adhesive properties, ensuring strong and reliable bonds between diverse substrates. A key innovation is their ability to lose adhesion under specific heating conditions, allowing for the clean separation of bonded components without damage. This facilitates easier repairs, extending product lifetimes, and enables the efficient recovery and reuse of valuable parts and materials from end-of-life products. For example, in EV battery packs or consumer electronics like smartphones, individual faulty components can be replaced, and precious materials can be recycled without the adhesive posing a barrier. This reversible bonding technology allows for component reuse beyond their initial design life, a significant advancement over traditional adhesives. Furthermore, by utilizing sustainable biomolecules as raw materials, the environmental footprint of the adhesive itself is reduced.

Background & Context

Modern manufacturing is under increasing pressure to transition from a linear 'take-make-dispose' model to a circular 'design-use-reuse' economy, driven by resource scarcity and environmental concerns. Industries such as automotive (including EVs), consumer electronics, and appliances face particular challenges in improving repairability and maximizing recycling efficiency due to product complexity and high costs. Conagen has leveraged its expertise in biotechnology to create high-performance materials from renewable resources, offering innovative solutions to these challenges. The debondable HMA occupies a crucial position within this context of promoting a circular economy.

Strategic Significance & Outlook

The bio-based debondable HMA developed by Conagen holds immense potential to significantly reduce waste and save manufacturing costs across multiple industrial sectors. This technology strongly supports the concept of 'eco-design,' where repairability and recyclability are considered from the product's initial design phase. Anticipated adoption of this adhesive in a wide range of products, including automobiles, electronics, and home appliances, is expected to enhance overall supply chain sustainability and contribute to a more resource-efficient society. Conagen aims to further advance this technology and expand its product portfolio to cover more diverse applications and materials, thereby establishing leadership in the adhesive market.

Source: <https://www.indianchemicalnews.com/general/conagen-launches-bio-based-debondable-hot-melt-adhesives-12812>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#05 Henkel Introduces Teroson EP 52 Series Epoxy Structural Adhesive for Automotive Body-in-White Production: Enabling Lightweighting and Vibration Damping

Published August 21, 2026 Assembly Magazine Germany



OVERVIEW

Henkel has launched the Teroson EP 52 Series, an epoxy structural adhesive providing both structural integrity and vibration damping for automotive Body-in-White applications. This heat-curing, one-component adhesive eliminates the need for traditional bitumen sheets and mechanical fasteners, supporting vehicle lightweighting and improving production efficiency. It is compatible with existing dispensing systems and maintains performance in high-temperature environments, resisting wash-off.

Key Findings

Henkel has introduced the Teroson EP 52 Series, an innovative epoxy structural adhesive designed for automotive Body-in-White (BiW) production, which simultaneously offers structural integrity and vibration damping. This product significantly contributes to vehicle lightweighting and streamlines manufacturing processes.

Technical / Clinical Details

The Teroson EP 52 Series is a one-component, heat-curing, solvent-free epoxy structural adhesive. This formulation ensures high compatibility with existing automated dispensing systems commonly used in automotive assembly lines. Upon curing, its unique chemical cross-linking mechanism creates an extremely strong bond and superior structural integrity within the joint. Notably, it delivers excellent vibration damping performance, obviating the need for traditional bitumen sheets, which are typically used for this purpose. This enables a reduction in overall vehicle weight, contributing to improved fuel efficiency and extended range for electric vehicles. Furthermore, the Teroson EP 52 Series exhibits high wash-off resistance, maintaining its performance in high-temperature environments and during vehicle washing processes, thereby enhancing automotive durability and safety.

Background & Context

The automotive industry faces pressing challenges in lightweighting vehicles to meet increasingly stringent fuel efficiency and emissions regulations, as well as demands for extended range in electric vehicles. Simultaneously, maintaining vehicle body rigidity, crash safety, and passenger comfort is crucial. Traditional spot welding and mechanical fastening methods have limitations in joining dissimilar materials, making it difficult to achieve both lightweighting and structural integrity. Adhesive technology is gaining prominence as a key solution to these challenges, enabling uniform joining of diverse materials and mitigating stress concentration. As a global leader in adhesive technologies, Henkel has a long history of providing high-performance solutions to the automotive industry, and the Teroson EP 52 Series represents the forefront of these innovations.

Strategic Significance & Outlook

The introduction of the Teroson EP 52 Series has the potential to establish a new standard for adhesive technology in automotive manufacturing. This adhesive will be an indispensable component in the body structures of next-generation vehicles, especially as the adoption of diverse lightweight materials like aluminum and composites continues to grow. Reducing welding processes will lower energy consumption on production lines and contribute to a reduced environmental footprint for manufacturing plants. Henkel is expected to support automakers in developing safer, greener, and higher-performing vehicles through this product, driving sustainable development in the automotive industry. Ongoing R&D focused on further automation compatibility and multi-functionality will likely expand its application scope even further.

Source: <https://www.assemblymag.com/articles/100325-new-tools-test-ev-charging-stations>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#06 H.B. Fuller Unveils EternaBond® Dry Technology System for RV Manufacturing: Dramatically Improving Watertightness and Production Speed

Published August 20, 2026 H.B. Fuller Blog USA



OVERVIEW

H.B. Fuller has launched its EternaBond® Dry Technology System (DTS) for RV manufacturing, which significantly enhances watertightness and production speed. This tape-form product replaces multi-step sealing processes involving screws and liquid sealants, creating a permanent, watertight seal that does not degrade over time. The system reduces manufacturing complexity, improves vehicle durability, and enables extended warranties, offering substantial benefits to RV manufacturers.

Key Findings

H.B. Fuller has introduced the EternaBond® Dry Technology System (DTS), a revolutionary solution for RV (Recreational Vehicle) manufacturing that dramatically improves both watertightness and production efficiency. This tape-form product redefines traditional multi-stage sealing processes, significantly enhancing RV durability and manufacturing speed.

Technical / Clinical Details

EternaBond® DTS is a tape-based product designed for sealing joints in RV roofs, floors, and panels. It replaces conventional sealing methods that typically require multiple materials and steps, such as screws, rivets, and liquid sealants. Upon application, DTS forms an immediate, strong, and permanent bond, creating a watertight seal that resists degradation over time. Unlike liquid sealants, DTS requires no curing time or drying process, allowing for rapid progression to the next manufacturing step. This accelerates RV assembly, improves production throughput, and reduces manufacturing lead times. The seals formed by DTS are also highly resistant to extreme weather conditions and aging, ensuring the long-term durability and reliability of RVs. This technology further enhances RV design flexibility, contributing to the realization of more innovative vehicle structures.

Background & Context

The RV industry is challenged with producing high-quality vehicles more quickly and efficiently. Watertightness and leak prevention are paramount concerns, directly impacting RV quality and customer satisfaction. Traditional sealing methods were often labor-intensive, required lengthy curing times, and were prone to quality variations. As a global leader in adhesives and sealants, H.B. Fuller has continuously developed innovative technologies to address these manufacturing challenges. The EternaBond® DTS is a strategic solution designed to help RV manufacturers overcome these hurdles and deliver more robust, higher-quality RVs to the market.

Strategic Significance & Outlook

The implementation of EternaBond® DTS has the potential to transform RV manufacturing standards and boost the industry's overall competitiveness. By contributing to reduced manufacturing costs, shortened production times, and enhanced product quality, RV manufacturers will be better positioned to offer longer product warranties. This, in turn, increases the appeal of RVs to end-consumers and is expected to expand market share. H.B. Fuller plans to further develop this technology, exploring applications in other transportation equipment and modular construction, which face similar sealing challenges. As demand for sustainable and efficient manufacturing solutions grows, innovative adhesive and sealing technologies like EternaBond® DTS will continue to increase in importance.

Source: <https://www.hbfuller.com/en/blog/theglue-talkblog/2026/august/rv-industry-trends-2026>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#07 Chinese Researchers Develop Oyster-Inspired "Bone-02" Bio-adhesive for 3-Minute Bone Repair: Eliminating Surgery and Promoting Cell Regeneration

Published August 24, 2026 Facebook (reposting a news item) China



OVERVIEW

Chinese researchers have developed a novel injectable bio-adhesive, "Bone-02," capable of repairing broken bones in just three minutes, inspired by the adhesive properties of oysters. This biodegradable biomaterial forms a strong, seamless bond with bone tissue even in blood-rich environments, eliminating the need for traditional metal implants or follow-up surgeries. Tested on over 150 patients, it has demonstrated excellent results in healing speed, promoting cell regeneration, and reducing infection risk.

Key Findings

Researchers in China have developed a revolutionary injectable bio-adhesive, named "Bone-02," capable of repairing bone fractures in a mere three minutes. This groundbreaking biomaterial draws inspiration from the remarkable adhesive capabilities of oysters, offering a safe and highly efficient alternative to traditional bone fracture treatments and significantly reducing patient burden.

Technical / Clinical Details

"Bone-02" is a novel biodegradable polymer-based bio-adhesive that exhibits the unique ability to form a seamless and strong bond with bone tissue even in blood-rich, wet environments. Traditional fracture treatments often involve metallic implants such as plates and screws to stabilize bone fragments, which come with risks of infection, foreign body reactions, and often necessitate subsequent removal surgeries. In contrast, "Bone-02" eliminates the need for implants, rapidly solidifying within three minutes after injection to stabilize the fracture site. Clinical trials involving over 150 patients have demonstrated that this adhesive not only accelerates bone healing but also actively promotes osteocyte regeneration and significantly reduces the risk of infection. Furthermore, its excellent biocompatibility ensures that it safely degrades and is absorbed by the body over time, eliminating concerns about foreign body residues.

Background & Context

Bone fracture treatment remains a global health challenge, characterized by high patient numbers, invasive surgical procedures, prolonged recovery periods, and the persistent risk of complications. With the advancement of aging societies, the incidence of fragility fractures due to osteoporosis is on the rise, creating an urgent demand for less invasive and faster treatment methods. The Chinese research team focused on the unique capabilities of natural organisms (bio-inspiration), elucidating the molecular mechanism by which oysters adhere strongly to surfaces like rocks. They successfully applied this understanding to develop a medical material, representing a breakthrough that combines biology and materials science to overcome limitations in conventional medical technology.

Strategic Significance & Outlook

The development of the "Bone-02" bio-adhesive holds the potential to usher in a paradigm shift in bone fracture treatment. Widespread clinical adoption of this technology could enable patients to experience faster recovery and relief from the pain and discomfort associated with conventional treatments. A reduction in surgical interventions would also contribute to cost savings across healthcare systems. The research team plans to conduct larger-scale clinical trials to further validate the safety and efficacy of "Bone-02" and aims for international medical device approval. Beyond fracture treatment, this adhesive is expected to find broad medical applications, including implant fixation in dentistry and other tissue repair procedures, potentially opening new frontiers in regenerative medicine.

Source: <https://www.facebook.com/groups/252029351211252/posts/859193360494845/>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#08 Norwegian/Austrian Researchers Discover Novel Electrode Adhesive 'Lithiated Polyacrylate (LiPAA)' to Significantly Extend Li-ion Battery Life

Published August 20, 2026 (No explicit source, appears to be an aggregate news portal or research summary) Norway



OVERVIEW

Scientists from the Norwegian University of Science and Technology and the Austrian Institute of Technology have discovered lithiated polyacrylate (LiPAA), a new electrode adhesive that significantly extends the life of high-voltage lithium-ion batteries. This material neutralizes hydrofluoric acid and retains metals leached from the cathode, addressing two major causes of battery aging. LiPAA also offers easier and more environmentally friendly electrode manufacturing due to its water solubility.

Key Findings

A team of scientists from the Norwegian University of Science and Technology (NTNU) and the Austrian Institute of Technology (AIT) has discovered a novel electrode adhesive, 'Lithiated Polyacrylate (LiPAA),' which dramatically extends the lifespan of high-voltage lithium-ion batteries. This breakthrough material holds significant implications for improving battery durability and performance.

Technical / Clinical Details

When applied to lithium-ion battery electrodes, LiPAA effectively addresses two primary causes of battery degradation simultaneously. First, it possesses the ability to neutralize hydrofluoric acid (HF) generated within the electrolyte. HF corrodes electrode materials, leading to capacity fade and premature battery failure. LiPAA sequesters this acid, mitigating its detrimental effects. Second, it effectively retains transition metals (e.g., nickel, cobalt, manganese) that leach from the cathode into the electrolyte. These metal ions can traverse the separator and deposit on the anode, promoting dendrite formation, which can lead to internal short circuits and safety hazards. By trapping these metal ions, LiPAA delays cathode degradation and prevents adverse effects on the anode. Furthermore, LiPAA's water solubility enables the use of environmentally benign aqueous solvents in electrode slurry preparation, potentially simplifying the electrode manufacturing process and reducing costs.

Background & Context

Lithium-ion batteries are indispensable for electric vehicles and renewable energy storage systems, but enhancing their lifespan and safety remains a top research priority. Particularly in modern high-voltage battery designs, electrolyte decomposition and electrode degradation tend to accelerate, making HF generation and metal leaching significant challenges. Conventional electrode binders (such as polyvinylidene fluoride, PVDF) typically require organic solvents, leaving room for improvement in terms of environmental impact and manufacturing cost. The discovery of LiPAA offers an innovative material chemistry approach to address these issues. It promises not only to extend battery life but also to pave the way for more sustainable and safer battery manufacturing.

Strategic Significance & Outlook

The development of LiPAA holds great promise for improving the performance and safety of next-generation lithium-ion batteries. If commercialized, this adhesive could contribute to extended driving ranges for electric vehicles, significantly prolonged cycle life, and enhanced long-term battery reliability. Moreover, its water solubility positions it to accelerate the adoption of environmentally friendly battery manufacturing processes. The research team plans to focus on optimizing the scale-up manufacturing process for LiPAA and evaluating its performance across various battery chemistries. This technology is expected to have a broad impact on the entire energy storage sector, catalyzing the realization of a higher-performing and more sustainable society.

Source: <https://globalenergyprize.org/en/2026/08/20/new-electrode-adhesive-extending-life-of-lithium-ion-batteries/>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#09 Koh Young to Unveil Advanced Packaging Measurement Technologies for AI, Chiplet, and Thermal Management at Electronics Packaging Symposium 2026

Published August 26, 2026 I-Connect007 South Korea



OVERVIEW

Koh Young Technology will participate in the 37th Annual Electronics Packaging Symposium (EPS 2026) to address measurement challenges in advanced packaging for AI, chiplet architectures, heterogeneous integration, and thermal management. The company will showcase its Meister Series and ZenStar platforms, highlighting their capabilities in high-resolution 3D measurement and AI-powered inspection for critical features and defects in demanding semiconductor packaging applications. These solutions are crucial for ensuring the quality and reliability of next-generation AI and high-performance computing devices.

Key Findings

Koh Young Technology is slated to participate in the 37th Annual Electronics Packaging Symposium (EPS 2026), where it will address complex measurement challenges associated with advanced packaging in critical areas such as AI, chiplet-based architectures, heterogeneous integration, and thermal management. The company will emphasize its high-resolution 3D measurement and AI-driven inspection solutions, exemplified by its Meister Series and ZenStar platforms, as essential tools for ensuring the quality and reliability of next-generation semiconductor packaging.

Technical / Clinical Details

At EPS 2026, Koh Young will particularly focus on challenges faced by cutting-edge semiconductor packaging technologies, including high-bandwidth memory (HBM) and AI-oriented packaging like CoWoS™ (Chip-on-Wafer-on-Substrate). These packaging architectures feature extremely fine solder bumps, tight gaps, and intricate multi-layered structures, making the detection of subtle defects — often missed by conventional 2D inspection — absolutely critical. The Meister Series and ZenStar platforms leverage high-precision 3D measurement technology to non-contactually assess detailed geometric characteristics such as volume, shape, and position of these minuscule interconnects. Furthermore, these AI-powered systems analyze inspection data in real-time, automatically identifying and classifying potential defects that could impact yield. This capability enables early detection of issues in the manufacturing process, minimizing scrap, and enhancing overall production efficiency and product reliability.

Background & Context

The rapid advancements in AI, 5G, and autonomous driving technologies have placed unprecedented demands not only on semiconductor chip performance but also on the underlying packaging technologies. Specifically, chiplets and heterogeneous integration, which involve integrating multiple chips into a single package, require larger package sizes, finer Redistribution Layers (RDLs), and efficient thermal management. In such complex package structures, even minute manufacturing defects can significantly impact overall performance and reliability, making high-precision measurement and inspection indispensable. As a long-standing leader in 3D measurement technology, Koh Young has contributed significantly to the semiconductor and electronics manufacturing industries, and its technologies have evolved to meet these new challenges.

Strategic Significance & Outlook

Koh Young's advanced measurement and inspection solutions will play a vital role in realizing the manufacturing reality of semiconductor packaging that underpins AI and next-generation computing. The integrated approach of high-resolution 3D measurement and AI streamlines quality control for increasingly complex packaging structures, contributing to shorter development cycles and cost reductions. Moving forward, the company is expected to further enhance its focus on data-driven intelligent manufacturing, optimizing entire production processes. Through continuous technological innovation, Koh Young aims to remain at the forefront of the industry, adapting to the evolution of new packaging technologies and materials.

Source: <https://iconnect007.com/article/151340/koh-young-advances-the-measurement-conversation-at-electronics-packaging-symposium-2026/151337/smt>

#10 Valence Bonding Technology Supports China's Industrial High-Speed, Automated Production with Enhanced EVA Hot Melt Adhesives

Published Date unknown Valence Bonding Technology (Shanghai) Co.,Ltd. China



OVERVIEW

Valence Bonding Technology (Shanghai) Co., Ltd. is continuously innovating and developing its modified EVA hot melt adhesive technology to strongly support high-speed, automated, and continuous industrial processes in China. The company is committed to ongoing research progress in EVA hot melt adhesive modification to meet the evolving demands of modern industry, enhancing efficiency and adaptability across various manufacturing sectors.

Key Findings

Valence Bonding Technology (Shanghai) Co., Ltd. is persistently driving innovation and development in modified EVA hot melt adhesive (HMA) technology to robustly support high-speed, automated, and continuous production processes within Chinese industries. This initiative represents a strategic effort aimed at enhancing manufacturing efficiency and adapting to the dynamic demands of modern industrial landscapes.

Technical / Clinical Details

Modified EVA hot melt adhesives are based on ethylene vinyl acetate (EVA) copolymers but incorporate specific additives and modification techniques to significantly improve performance characteristics such as bond strength, heat resistance, weatherability, and processing speed compared to traditional EVA adhesives. They are particularly well-suited for high-speed automated application lines and demonstrate effectiveness in diverse industrial sectors, including packaging, bookbinding, woodworking, and non-woven product manufacturing. Their rapid initial tack and short open time are critical for maximizing production line speeds. Customization options are available to adjust adhesive viscosity, softening point, and curing speed, allowing for flexible adaptation to various substrates and production conditions. Progress is also being made towards environmentally friendly, low-VOC (Volatile Organic Compound) formulations.

Background & Context

As China's manufacturing sector solidifies its position as a global supply chain hub, it faces challenges in boosting productivity, stabilizing quality, and managing rising labor costs. In response, national strategies are promoting industrial automation and a transition towards intelligent manufacturing. Adhesives play a critical role in many manufacturing processes, with a growing demand for hot melt adhesives that enable fast and efficient assembly. Valence Bonding Technology has recognized this market trend and has invested in HMA research and development for many years. The company's efforts aim to provide fundamental technologies essential for the modernization and enhancement of China's manufacturing competitiveness.

Strategic Significance & Outlook

Valence Bonding Technology plans to accelerate its R&D in EVA hot melt adhesive modification technologies. With increasing demands for sustainability, future efforts are likely to focus on incorporating bio-based materials and developing debondable adhesives to improve recyclability. This will enable the company to meet the diverse needs of customers across broad industrial sectors, including packaging, automotive, and electronics, by providing higher-performing and more environmentally friendly adhesive solutions. Driven by growth in the domestic Chinese market and expanding HMA demand across the Asia-Pacific region, Valence Bonding Technology is expected to further expand its business through its technological prowess and market responsiveness.

Source: <https://www.valencebond.cn/news/3.html>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#11 AI Advancements Drive New Semiconductor Packaging Paradigm: Panel-Based Technologies Surpass Traditional Silicon Interposer Limits

Published August 25, 2026 Facebook (reposting an industry trend) USA



OVERVIEW

The rapid evolution of AI is pushing semiconductor packaging beyond the practical limits of traditional silicon interposers, driving a new paradigm. Panel-based packaging is emerging as a critical solution for larger form factors and new substrate challenges, including fan-out packaging. This shift necessitates higher throughput and finer RDL structures to meet the demands of AI and advanced computing, overcoming inherent constraints of previous technologies.

Key Findings

The rapid advancements in Artificial Intelligence (AI) technology are catalyzing a significant transformation in semiconductor packaging, giving rise to a new paradigm that extends beyond the physical limitations of traditional silicon interposers. Specifically, panel-based packaging is emerging as a pivotal solution to address the challenges posed by increasingly larger form factors and novel substrate materials.

Technical / Clinical Details

The performance requirements of AI applications are leading to an increase in the size and complexity of individual chips, alongside a growing need to integrate multiple components, such as High Bandwidth Memory (HBM). This demands larger package sizes that conventional wafer-based packaging technologies cannot effectively accommodate. Panel-based packaging involves processing multiple chips simultaneously on large square or rectangular panels, offering the potential to enhance production efficiency and reduce manufacturing costs. This technology is intimately linked with the evolution of fan-out packaging (FOPLP) and plays a crucial role in bridging the size gap between chips and motherboards. Specifically, achieving finer Redistribution Layers (RDLs) and higher throughput, in conjunction with advancements in technologies like Wafer-Level Chip Scale Package (WLCSP) and Through Silicon Via (TSV), is imperative for the success of packaging destined for AI and High-Performance Computing (HPC).

Background & Context

As the semiconductor industry grapples with the perceived limits of Moore's Law, focus has shifted from solely improving internal chip performance to optimizing system-level performance through packaging technologies. The intensification of AI processors and HBM has particularly complicated packaging challenges related to thermal management, power delivery, and signal integrity. While traditional silicon interposers have been adopted primarily for niche high-performance applications due to cost and size constraints, the widespread adoption of AI necessitates more versatile and economically scalable packaging solutions. In this context, panel-based packaging is positioned as a significant innovation for next-generation semiconductor manufacturing.

Strategic Significance & Outlook

The progression of panel-based packaging technology is poised to be a crucial driver for further accelerating the growth of the AI and HPC markets. This will enable the realization of higher-performance and more cost-effective AI chips, facilitating the broader adoption of AI across various applications, including data centers, edge AI devices, and autonomous vehicles. The success of this new technology mandates continuous innovation in materials science, manufacturing equipment, and process technologies, requiring collaborative efforts across the industry. In the future, panel-based packaging has the potential to become a mainstream semiconductor packaging technology, serving as a core foundation for the computing infrastructure of the AI era.

Source: <https://www.facebook.com/AppliedMaterialsInc/posts/ai-is-pushing-package-sizes-beyond-the-practical-limits-of-traditional-silicon-i/1503511258476357/>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#12 SK hynix's MR-MUF and Samsung's TC-NCF Revolutionize Thermal Management in AI Semiconductor HBM: Driving Advanced Packaging Evolution

Published August 22, 2026 USD Analytics Global



OVERVIEW

The evolution of AI is driving significant changes in semiconductor packaging and High Bandwidth Memory (HBM) technologies, with SK hynix's Advanced MR-MUF and Samsung's TC-NCF technologies solving critical thermal management and packaging challenges. SK hynix improves HBM heat dissipation with new epoxy molding compounds, while Samsung establishes a competitive edge with TC-NCF for thinner dies and improved heat transfer. These technologies are essential for enhancing the reliability of high-performance AI semiconductors.

Key Findings

The rapid advancement of AI is instigating unprecedented evolution in semiconductor packaging, particularly for High Bandwidth Memory (HBM) technology. SK hynix's Advanced Mass Reflow Molded Underfill (MR-MUF) technology and Samsung's Thermal Compression Non-Conductive Film (TC-NCF) technology are resolving pressing thermal management and warpage issues associated with increased HBM density, thereby dramatically improving the performance and reliability of AI semiconductors.

Technical / Clinical Details

SK hynix's Advanced MR-MUF technology significantly improves heat dissipation in HBM stacks. In this process, a liquid epoxy molding compound is precisely filled between micro-bumps, minimizing voids. This novel epoxy molding compound exhibits excellent thermal conductivity, especially in 16-high HBM4 configurations, efficiently channeling heat from the chips to the heat sink. This prevents performance degradation due to overheating and extends chip lifespan. Meanwhile, Samsung's TC-NCF technology was developed to accommodate thinner dies and narrower gaps. NCF is a non-conductive film that melts during the thermal compression (TC) bonding process, uniformly filling the extremely fine gaps between chips. This effectively manages warpage issues and enables precise stacking of multiple dies. Both companies' technologies are indispensable for ensuring high yield and reliability in increasingly complex heterogeneous integration.

Background & Context

The surge in AI demand is pushing the boundaries of data processing capabilities, compelling semiconductor manufacturers to develop high-performance, high-integration, and efficient thermal management solutions. As evidenced by Intel's advanced packaging strategies and TSMC's CoWoS™ architecture roadmap, increasing package dimensions are an unavoidable trend. HBM is a key memory technology for maximizing the performance of AI processors, but its multi-layer stacking structure creates thermal challenges and mechanical stresses that conventional packaging technologies struggle to address. SK hynix and Samsung are proactively tackling these issues by developing their respective unique materials and process technologies. This represents a strategic investment to establish competitive advantage in the AI-driven semiconductor market, highlighting the crucial role of materials science and process engineering convergence.

Strategic Significance & Outlook

SK hynix's MR-MUF and Samsung's TC-NCF technologies will play pivotal roles in shaping the future of AI semiconductors and HBM. These innovations will enable faster, more powerful, and more reliable AI systems, accelerating the adoption of AI in a wide range of applications such as data centers, autonomous driving, and edge AI devices. Moving forward, both companies are expected to continuously evolve these technologies to support further high-stacking of next-generation HBM (HBM4 and beyond) and more complex heterogeneous integration. Close collaboration with material suppliers and the optimization and automation of manufacturing processes will be key to the success of these technologies, driving the overall technological roadmap of the semiconductor industry.

Source: <https://www.usdanalytics.com/our-insights/chemicals/ai-semiconductor-packaging-advanced-materials-1>

#13 YINCAE Unveils UF 88UV Optical Underfill with Near 100% Transparency for Advanced Semiconductor Packaging, Enhancing Inspectability

Published August 27, 2026 openPR.com / YINCAE Advanced Materials, LLC USA



OVERVIEW

YINCAE Advanced Materials has launched UF 88UV, an innovative high-transparency optical underfill tailored for advanced semiconductor and optoelectronic packaging, boasting approximately 100% visible light transmittance. This novel material offers excellent flowability at room temperature, facilitating efficient processing, and fluoresces post-cure, significantly simplifying inspection. The UF 88UV is poised to enhance the performance and reliability of high-density optoelectronic devices and complex semiconductor assemblies.

Key Findings

YINCAE Advanced Materials has introduced UF 88UV, a groundbreaking high-transparency optical underfill designed for advanced semiconductor packaging and optical modules. This new product achieves an exceptional visible light transmittance of approximately 100%, maximizing the performance of optoelectronic devices.

Technical / Clinical Details

UF 88UV is ideally suited for applications requiring high transparency, particularly in optical modules, optoelectronic devices, and advanced semiconductor packaging such as flip-chip and chip-scale packages (CSPs). The underfill material exhibits superior flowability, easily penetrating minuscule gaps at room temperature, which enables efficient processing on manufacturing lines. A unique feature of UF 88UV is its fluorescence after curing, which significantly simplifies quality control inspections and aids in the early detection of potential defects. The material's inherent stability and reliability are also critical factors in extending the lifespan of devices in demanding environments.

Background & Context

The current semiconductor and optoelectronics industries are driven by trends toward miniaturization, higher performance, and increased density, placing ever-greater demands on packaging materials. In devices that transmit and receive optical signals, the transparency and reliability of the underfill material directly impact product performance. Traditional underfills have faced limitations in transmittance and post-cure visibility, but UF 88UV emerges as a solution to these challenges. The fluorescent property addresses manufacturing bottlenecks, promising improved yield and reduced production costs, positioning it as a significant advancement in the field.

Strategic Significance & Outlook

The introduction of UF 88UV is set to establish a new benchmark in the advanced semiconductor packaging and optoelectronic device markets. Its superior optical properties and enhanced manufacturing efficiency provide an essential foundation for the development of next-generation high-speed communication systems, AI/HPC data centers, and AR/VR devices. YINCAE is expected to leverage this technology to continue leading the industry in both the reliability and manufacturability of high-performance electronic components. The anticipated adoption of UF 88UV will likely lead to the market introduction of more powerful and durable devices.

Source: <https://www.openpr.com/news/4614343/yincae-launches-innovative-uf-88uv-optical-underfill>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#14 Cyclomer Unveils 'D-glue' Debondable Adhesive, Drastically Improving Technical Plastic Recovery from Electronics through Heat Activation

Published August 27, 2026 Cyclomer / Recycling Today UK



OVERVIEW

A new heat-activated debondable adhesive, 'D-glue,' has been introduced, designed to lose adhesion upon heating, significantly enhancing the recovery of high-value technical plastics from end-of-life electronics. This innovation simplifies the disassembly of complex consumer goods, making the extraction of recyclable polymers commercially viable. D-glue enables clean, damage-free separation of materials, improving purity and boosting the economic feasibility of recycling, thus increasing the value of e-waste and contributing to a circular economy.

Key Findings

Cyclomer, in collaboration with recycled plastics companies, has announced 'D-glue,' an innovative debondable adhesive that loses its bonding properties when exposed to heat. This technology is expected to dramatically improve the recovery rate of high-value technical plastics from end-of-life electronic devices.

Technical / Clinical Details

'D-glue' is a thermally activated adhesive engineered to lose its adhesive strength upon exposure to a specific temperature. This characteristic allows for easy and damage-free disassembly of complex consumer goods, such as smartphones and laptops, at the end of their lifecycle. Traditionally, separating adhesive-bound components in recycling processes has been challenging, often leading to contamination or damage of valuable plastics, significantly diminishing their value. By enabling the clean and undamaged separation and recovery of polymers, D-glue enhances the purity of reclaimed plastics, expanding their potential for high-grade reuse. This advancement not only increases the economic viability of recycling but also contributes directly to waste reduction.

Background & Context

The rapid proliferation of electronic devices and shorter replacement cycles have led to a severe global challenge: the escalating volume of electronic waste (e-waste). While e-waste contains valuable metals and plastics, efficient recovery has been hampered by conventional disassembly and recycling methods. Global regulations, particularly in regions like the European Union, are increasingly advocating for 'right to repair' initiatives and a transition towards a circular economy, intensifying the demand for improved recyclability at the product design stage. Debondable adhesives like D-glue are emerging as a pivotal technology within this context, offering a solution to reduce environmental impact and enhance resource efficiency throughout a product's entire lifecycle.

Strategic Significance & Outlook

The D-glue technology holds the potential to revolutionize recycling processes not only in electronics but also across various sectors including automotive, home appliances, and medical devices. Manufacturers can integrate this adhesive into product designs to reduce future recycling costs and simultaneously contribute to their corporate sustainability goals. Consumers will benefit from more widely recyclable products, promoting environmentally conscious choices. The widespread adoption of this technology is expected to foster efficient resource utilization, representing a significant step toward achieving a sustainable society and strengthening global efforts in materials circularity.

Source: <https://cyclomer.co.uk/en/news/debondable-adhesive-electronics-plastic-recycling>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#15 DELO Unveils Ultra-Low Temperature Curing Adhesives for Consumer Electronics, Achieving Curing at 45°C for Enhanced Productivity and Component Protection

Published August 20, 2026 DELO News Germany



OVERVIEW

DELO has introduced a new generation of adhesives enabling ultra-low temperature (SLT) curing from just 45°C for consumer electronics assemblies, a significant reduction from conventional methods. Part of the DELO DUALBOND LT series, these products achieve rapid curing in 10 minutes at 60°C or 1 hour at 45°C, boosting productivity while safeguarding delicate components. This technology allows for inline heat tunnels as a viable alternative to batch ovens, setting a new standard for electronics manufacturing efficiency.

Key Findings

DELO has unveiled a groundbreaking new generation of adhesives that enable ultra-low temperature (SLT) curing starting from just 45°C, specifically designed for consumer electronics assemblies. This technology offers a dual benefit by significantly boosting production efficiency while simultaneously protecting delicate electronic components from thermal stress.

Technical / Clinical Details

These newly introduced adhesives, forming part of the DELO DUALBOND LT series, are characterized by their ability to cure at exceptionally low temperatures. Specifically, they achieve full cure in just 10 minutes at 60°C, or exhibit sufficient strength within one hour at an even lower 45°C. This represents a substantial leap in production efficiency compared to conventional adhesives that typically demand higher temperatures or longer curing cycles. The ultra-low temperature curing minimizes the risk of thermal damage to sensitive electronic components such as MEMS sensors, camera modules, and OLED displays. This technology enables manufacturers to implement inline heat tunnels, offering superior space efficiency and processing speed compared to traditional batch oven methods. For high-volume production, common in consumer electronics, this translates into a proven dramatic improvement in production throughput.

Background & Context

The consumer electronics market is continuously driven by trends towards device miniaturization, multifunctionality, and intense cost competitiveness. Consequently, manufacturing processes are under pressure to deliver higher precision, efficiency, and flexibility. The increasing prevalence of heat-sensitive precision components has highlighted the limitations of conventional high-temperature curing processes. High temperatures can lead to performance degradation or warpage in components, resulting in lower yields and increased defect rates. DELO's ultra-low temperature curing adhesives provide a direct solution to these challenges, alleviating manufacturing constraints, enhancing design freedom, and fostering new product innovations across the industry.

Strategic Significance & Outlook

DELO's ultra-low temperature curing adhesives hold the potential to become a new standard in the manufacturing of a wide range of consumer electronic products, including smartphones, wearable devices, and IoT gadgets. The widespread adoption of this technology is expected to accelerate the realization of thinner, higher-performing, and more durable electronic devices. Furthermore, by contributing to reduced energy consumption in manufacturing processes, these adhesives also garner attention for their environmental benefits. DELO is positioned to continue developing innovative material solutions that meet market needs, thereby strongly supporting the evolution of the electronics industry and cementing its role as a key enabler of future technological advancements.

Source: <https://www.delo-adhesives.com/news-and-dates/delo-news/detail/slt-adhesives-less-heat-more-speed/>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#16 Nordson Electronics Solutions Unveils ASYMTEK Vantage® XL Fluid Dispensing System for Panel-Level Packaging at SEMICON Taiwan 2026, Boosting Throughput and Yield for AI/HPC Chips

Published August 25, 2026 Morningstar / Nordson Electronics Solutions USA



OVERVIEW

Nordson Electronics Solutions launched the new ASYMTEK Vantage® XL fluid dispensing system at SEMICON Taiwan 2026, specifically engineered to meet the stringent demands of panel-level and advanced semiconductor packaging. This system is designed to achieve the high throughput and yield required by AI, high-performance computing, and advanced packaging applications. Key features include improved dispense underflow and warpage mitigation, flexible tooling for large panel sizes, and integrated thermal management for rapid and uniform heating.

Key Findings

Nordson Electronics Solutions has unveiled the innovative ASYMTEK Vantage® XL Fluid Dispensing System at SEMICON Taiwan 2026, designed to meet the demanding requirements of panel-level packaging (PLP) and other advanced semiconductor packaging applications.

Technical / Clinical Details

The ASYMTEK Vantage® XL system was developed to address the exceptionally high throughput and yield demands arising from modern AI, high-performance computing (HPC), and advanced semiconductor packaging applications. This system incorporates several cutting-edge technologies. Firstly, it features enhanced capabilities for improving dispense underflow and effectively mitigating warpage in semiconductor substrates, which is critical for increasing reliability at fine pitch interconnects and reducing manufacturing defects. Secondly, it provides flexible tooling support for large panel sizes, enabling production across diverse packaging formats. Furthermore, an integrated thermal management system ensures rapid heating and excellent temperature uniformity, guaranteeing stable and consistent material deposition for delicate components. These features are essential for maintaining repeatability and quality consistency in advanced packaging processes that require precise material application.

Background & Context

The rapid advancements in AI and HPC have revolutionized semiconductor chip design and manufacturing, leading to an explosive demand for higher-performance, higher-density packaging solutions. Panel-Level Packaging (PLP), in particular, is gaining traction as it allows for processing a larger number of chips simultaneously on bigger substrates compared to traditional wafer-level packaging, thereby offering significant improvements in cost-efficiency and production throughput. However, PLP introduces new challenges, such as warpage in large substrates and maintaining uniformity in fluid dispensing. Nordson Electronics Solutions' ASYMTEK Vantage® XL integrates the latest advancements in materials science and precision engineering to address these critical manufacturing hurdles.

Strategic Significance & Outlook

The introduction of the ASYMTEK Vantage® XL dispensing system holds immense potential for significantly enhancing production capabilities and quality standards in the advanced semiconductor packaging market. This technology, by enabling precise material deposition crucial for the evolution of AI chips and HPC processors, will accelerate the commercialization of next-generation electronic devices. Furthermore, the improvements in throughput and yield will translate into reduced manufacturing costs, strengthening the competitiveness of semiconductor manufacturers. Nordson Electronics Solutions is expected to solidify its position as a leading solution provider in the rapidly growing advanced packaging sector through this innovative system, paving the way for more sophisticated and efficient electronic components.

Source: <#>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#17 China's Top 5 Self-Adhesive PVC Film Manufacturers Drive Interior Decoration Innovation with Water-Based Acrylic Adhesive Technology for Furniture and Wall Surfaces

Published August 28, 2026 EIN Presswire China



OVERVIEW

Five leading Chinese self-adhesive PVC film manufacturers are revolutionizing the interior decoration market with innovative products for furniture and wall surfaces, leveraging advanced water-based acrylic pressure-sensitive adhesive technology. These companies offer high-quality PVC films for furniture refurbishment, cabinet wrapping, and door/wall decoration, enabling easy peel-and-stick application. Their products comply with international standards like REACH and RoHS and are actively exported to global markets including Europe, South America, and the Middle East.

Key Findings

Five leading Chinese self-adhesive PVC film manufacturers are spearheading the transformation of the interior decoration market through innovative self-adhesive PVC film products that utilize water-based acrylic pressure-sensitive adhesive technology. These companies are providing solutions that enhance both the aesthetics and functionality of furniture and wall surfaces.

Technical / Clinical Details

The self-adhesive PVC films produced by these Chinese manufacturers primarily consist of a water-based acrylic pressure-sensitive adhesive and a release paper backing. This design allows consumers to easily refresh existing surfaces by simply peeling and sticking the film, without requiring special tools or professional skills. These films are suitable for various interior decoration applications, including furniture surfaces, cabinets, doors, and walls, offering both design flexibility and ease of application. Water-based acrylic adhesives are advantageous due to their lower VOC (Volatile Organic Compound) emissions, aligning with environmental concerns and enhancing safety. Beyond adhesive performance, these films also exhibit excellent durability and water resistance, providing long-lasting quality. All products strictly comply with international chemical substance regulatory requirements such as REACH and RoHS, ensuring product safety and environmental compatibility for global distribution.

Background & Context

In recent years, there has been a growing trend among consumers towards DIY (Do It Yourself) culture and a desire to easily customize their living spaces. Compared to traditional interior decoration methods, self-adhesive films offer significant reductions in time, cost, and effort, making them popular among individual consumers and professional designers alike. Furthermore, tightening environmental regulations and increasing health consciousness are giving products that use water-based, low-VOC adhesives a market advantage. These Chinese manufacturers are actively exporting their products to global markets, including Europe, South America, the Middle East, and CIS countries, demonstrating the competitiveness of their technology and products. This strategic expansion is transforming them from mere manufacturing hubs into innovation leaders in the interior decoration materials sector.

Strategic Significance & Outlook

The self-adhesive PVC film market is expected to continue its robust growth, driven by ongoing urbanization and the expansion of the home renovation market. Leading Chinese manufacturers will likely focus on developing products with further enhanced sustainability, design diversity, and functional properties (e.g., anti-bacterial or fire-retardant features). The integration with digital printing technologies is also expected to accelerate the offering of personalized designs. These technological innovations are poised to play a crucial role in shaping a future where consumers can achieve easier, more environmentally friendly, and uniquely personalized living spaces.

Source: <https://www.einpresswire.com/article/937742166/five-leading-self-adhesive-pvc-film-manufacturers-in-china-2026-driving-innovation-in-interior-decoration>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#18 3M and BOE Establish Joint Lab to Accelerate Display Technology Innovation, Focusing on 'Wrinkle-Free' Foldable Display Reliability

Published August 24, 2026 3M News Center USA



OVERVIEW

3M and BOE have opened a joint laboratory within the BOE Technology Innovation Center to accelerate display technology innovation. This collaborative R&D platform integrates BOE's display innovation with 3M's materials science capabilities to drive high-performance solutions for LCD, OLED, and MLED applications. Notably, 3M's optical adhesives and custom bonding solutions are contributing to the enhanced reliability and design of BOE's 'wrinkle-free' foldable displays, significantly advancing next-generation display technology.

Key Findings

3M and BOE (Beijing Oriental Electronics) have announced the establishment of a joint laboratory within the BOE Technology Innovation Center, aimed at accelerating innovation in display technology. This partnership marks a crucial step toward enhancing the performance and reliability of next-generation displays.

Technical / Clinical Details

The core objective of this collaborative R&D platform is to combine BOE's advanced display innovation capabilities with 3M's deep expertise in materials science, cultivated over many years. The research focus will be on developing high-performance solutions for leading display applications, including LCD (Liquid Crystal Display), OLED (Organic Light-Emitting Diode), and MLED (Mini/Micro LED Displays). Specifically, 3M's advanced optical adhesives and custom bonding solutions are positioned as essential technologies for improving the reliability and design of BOE's 'wrinkle-free' foldable displays. These materials are optimized to withstand the stresses encountered during folding, maintain optical clarity, and ensure long-term durability, playing a critical role in enhancing the user experience.

Background & Context

Display technology forms the core of modern digital life, from smartphones and tablets to televisions and augmented reality (AR)/virtual reality (VR) devices. There is a growing demand for flexible displays, such as foldable and rollable screens, which require breakthroughs in materials science that conventional display technologies cannot achieve. In this context, the strategic alliance between BOE, a leading display manufacturer, and 3M, with its global expertise in adhesives, films, and optical materials, represents a logical step to combine their strengths and accelerate the commercialization of next-generation displays. The establishment of a joint laboratory aims to foster closer collaboration between materials and device design and manufacturing, thereby shortening the innovation cycle and bringing advanced products to market faster.

Strategic Significance & Outlook

The joint laboratory between 3M and BOE holds the potential to redefine the future of display technology. The new materials and solutions emerging from this partnership will enable the market introduction of more immersive, durable, and innovative display products. Particularly in the foldable device segment, achieving 'wrinkle-free' designs and long-term reliability that meet consumer expectations will significantly contribute to market expansion. The ongoing cooperation between these two global leaders is expected to drive technological advancements across the entire display industry, ultimately transforming how we interact with digital information and experiences on a fundamental level.

Source: <https://news.3m.com/3M-and-BOE-launch-joint-laboratory-to-accelerate-display-technology-innovation>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#19 tesa Introduces 'tesa 4563' Adhesive Tape for Industrial Roller Wrapping, Combining Excellent Anti-Adhesion and Anti-Slip Properties for Printing and Web Processing Industries

Published August 26, 2026 openPR.com / ABNewswire Germany



OVERVIEW

tesa has launched 'tesa 4563,' a new adhesive tape specifically designed for industrial roller wrapping applications. This product features a specially treated fabric substrate and a silicone rubber coating, delivering both superior resistance to adhesive materials and reliable anti-slip performance on smooth surfaces. tesa 4563 is set to enhance production efficiency and product quality across various sectors, including the printing, textile, label printing, and web processing industries.

Key Findings

tesa has announced 'tesa 4563,' a high-performance adhesive tape specifically engineered for industrial roller wrapping applications. This new product addresses critical challenges in industries like printing by simultaneously offering excellent resistance to adhesive materials and reliable anti-slip performance on smooth surfaces.

Technical / Clinical Details

'tesa 4563' achieves its high functionality through a unique construction. It utilizes a specially treated fabric substrate coated with high-quality silicone rubber. This combination provides superior anti-adhesion properties, preventing various adhesive materials (such as inks, glues, and coatings) used in printing processes from sticking to the roller surface. This reduces the frequency of roller cleaning and improves maintenance efficiency. Furthermore, the silicone rubber coating ensures reliable grip, preventing slippage when smooth materials (e.g., plastic films or paper) pass over the roller. This is crucial for maintaining precise material transport and tension control in web processing and label printing. Stable anti-slip performance prevents material misalignment and wrinkling on production lines, directly leading to improved product quality and stable yields.

Background & Context

The printing and web processing industries constantly demand higher production speeds and consistent quality. The condition of roller surfaces is a critical factor in meeting these requirements. Residues from adhesives or inks, or material slippage, can lead to production stoppages, material waste, and product defects, resulting in significant cost increases. Conventional roller wrapping materials have struggled to maintain both anti-adhesion and anti-slip properties at a high level simultaneously. tesa 4563 provides a comprehensive solution to this long-standing challenge, contributing to enhanced industry competitiveness by improving the efficiency and reliability of production environments.

Strategic Significance & Outlook

The introduction of tesa 4563 has the potential to establish new standards not only in the printing industry but also in the textile sector and other industries employing roll-to-roll processes. This product will serve as an essential tool for manufacturers aiming to achieve higher production efficiency and superior product quality. tesa is expected to continue providing innovative adhesive solutions tailored to specific industrial needs, thereby contributing to the optimization of various manufacturing processes and the enhancement of sustainability. Especially in increasingly high-speed production lines, stable material feeding and quality maintenance are indispensable, and tesa 4563 is poised to strengthen its market presence as a product that meets these demanding requirements.

Source: <https://www.openpr.com/news/4614641/dedicated-for-label-printers-why-tesa-4563-is-the-specified>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#20 Chase Corporation Acquires Hylomar Holdings Limited, Bolstering Presence in Specialty Sealants and Adhesives Markets for Industrial, Aerospace, and Electronics Sectors

Published August 24, 2026 Morningstar / PR Newswire USA



OVERVIEW

Chase Corporation, a global provider of engineered materials, has acquired Hylomar Holdings Limited, a designer and manufacturer of specialty sealants and adhesives. This acquisition significantly strengthens Chase Corporation's presence in the specialty sealing and adhesive materials sectors across industrial, transportation, aerospace, power generation, and electronics markets. Integrating Hylomar's expertise and customer base will expand Chase's ability to offer high-performance material solutions, further enhancing its market competitiveness.

Key Findings

Chase Corporation, a global leader in engineered materials, has successfully acquired Hylomar Holdings Limited, a renowned designer and manufacturer of specialty sealants and adhesives. This strategic move is poised to significantly enhance Chase Corporation's market position within the specialty sealing and adhesive sector.

Technical / Clinical Details

Hylomar has a long-standing track record and strong reputation for designing and manufacturing high-performance specialty sealants and adhesives used in diverse and demanding markets, including industrial, transportation, aerospace, power generation, and electronics. Their product portfolio is recognized for its superior performance and reliability under harsh conditions, such as extreme temperatures, high pressures, and chemical exposure. With this acquisition, Chase Corporation integrates Hylomar's unique formulation technologies, manufacturing processes, and extensive product range into its existing technical foundation. This integration will enable Chase to offer a broader and more advanced array of bonding and sealing solutions to customers in these critical markets. Particularly in the aerospace and electronics sectors, where material durability, lightweight properties, and specific functional requirements (e.g., electrical insulation or thermal conductivity) are stringent, Hylomar's specialized expertise is expected to generate significant synergistic effects in Chase's product development efforts.

Background & Context

The market for specialty adhesives and sealants is experiencing continuous growth, driven by an increasing demand for high-performance materials. The development of new transportation modalities (such as EVs), advanced power generation systems, and increasingly miniaturized and high-functional electronic devices further underscores the importance of these advanced materials. Chase Corporation has a long history of providing specialized protective and functional materials for various industries. The acquisition of Hylomar aligns with Chase's core growth strategy to expand its portfolio in high-value specialty materials and capture new market opportunities. This strategic acquisition positions Chase to maintain its competitive edge in global markets and strengthens its capacity to deliver comprehensive solutions for complex engineering challenges faced by its customers.

Strategic Significance & Outlook

The acquisition of Hylomar represents a pivotal milestone for Chase Corporation, accelerating both market share expansion in existing sectors and the creation of new growth opportunities. The integration of the two companies' technologies and customer bases is expected to enhance the speed of new product development and facilitate the introduction of more innovative solutions to the market. Particularly, the escalating demand in high-growth areas like transportation, aerospace, and electronics will provide a robust foundation for the combined entity to achieve sustained long-term growth. This acquisition reflects broader industry trends of consolidation and accelerated innovation in the specialty materials market, thereby contributing to the overall advancement of the sector.

Source: <https://www.morningstar.com/news/pr-newswire/20260824ne32396/chase-corporation-acquires-hylomar>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#21 FTC Blocks Henkel's \$725 Million Acquisition of Liquid Nails to Preserve Competition in Construction Adhesives Market

Published August 24, 2026 The National Law Review USA



OVERVIEW

The U.S. Federal Trade Commission (FTC) secured a permanent injunction blocking Henkel AG & Co. KGaA's proposed \$725 million acquisition of Liquid Nails. This landmark decision marks the first successful application of the FTC's new merger litigation strategy aimed at maintaining competition in the construction adhesives market and protecting consumers' interests in price, quality, and innovation. The FTC argued that eliminating intense competition between Henkel's Loctite and Liquid Nails would lead to increased costs, reduced quality, and stifled innovation in residential building materials.

Key Findings

The U.S. Federal Trade Commission (FTC) successfully blocked Henkel AG & Co. KGaA's proposed \$725 million acquisition of the Liquid Nails construction adhesive brand, securing a permanent injunction from the court. This decision is being hailed as a landmark victory for the FTC's new litigation strategy aimed at preserving market competition.

Technical / Clinical Details

At the heart of the lawsuit was the preservation of the competitive landscape within the construction adhesives market. The FTC asserted that Henkel's flagship brand, Loctite, and the target of the acquisition, Liquid Nails, were "fierce competitors," particularly in the residential building materials sector. According to the FTC's investigation, these two brands directly competed on product performance, pricing, and distribution channels, offering crucial choices for consumers. The regulatory body argued that approving the acquisition would eliminate this intense competition, likely leading to increased consumer prices, a decline in product quality, and a stagnation of innovation in the market. The court sided with the FTC, acknowledging the significant potential for the acquisition to substantially lessen competition, and consequently ruled to block the merger. This decision signals that regulatory bodies are closely scrutinizing large-scale consolidations within the adhesive industry.

Background & Context

The construction adhesives market is significantly influenced by fluctuations in residential building and renovation demands. Over the past few years, the market has seen increased consolidation by major players, altering the competitive environment. The FTC has expressed concerns that increasing market concentration in specific segments could ultimately harm consumers. This lawsuit is part of a broader policy shift initiated by the FTC post-2021, adopting a more aggressive stance on merger reviews. The new approach, which evaluates anti-competitive risks from multiple perspectives rather than relying solely on traditional economic models, proved successful. This case sets a precedent, suggesting that regulatory authorities may apply similar stringent standards to future merger and acquisition activities across other industrial sectors.

Strategic Significance & Outlook

The FTC's victory is likely to prompt companies to adopt a more cautious approach to large-scale merger and acquisition deals, especially in markets where key brands directly compete. Going forward, companies in the adhesives industry considering acquisitions that could increase market concentration will need to present clear competitive benefits and consumer advantages that can withstand rigorous scrutiny from competition authorities. This outcome is expected to foster innovation in the market and ensure an environment where consumers benefit from more choices and fair prices.

Simultaneously, for small and emerging businesses, the curtailment of market dominance by larger players might open up new entry opportunities and growth potentials, thereby diversifying the market landscape.

Source: <https://www.sheppard.com/insights/blogs/ftcs-new-litigation-strategy-sticks-court-blocks-henkels-725m-bid-for-liquid-nails>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#22 Epsilon Unveils Advanced Semiconductor Packaging Materials at ASPS 2026 for AI Data Centers: Die Attach Copper Paste Improves Thermal Dissipation and Reduces Cost

Published August 26, 2026 The Elec Inc. South Korea



OVERVIEW

Epsilon showcased advanced packaging material solutions at the 2026 Advanced Semiconductor Packaging & Chiplet Show (ASPS 2026), targeting advancements in AI data centers. Exhibited materials include a novel "Die Attach Copper Paste (DACP)" designed to improve thermal dissipation and reduce costs for power semiconductor components. The company also introduced EMI shielding materials and adhesives for ultra-miniature semiconductors, notably Silver-Coated Copper (SCC), which maintains cost-effectiveness while offering conductivity and oxidation suppression. These innovations contribute significantly to enhancing AI/HPC semiconductor performance.

Key Findings

Epsilon has announced a suite of innovative advanced packaging material solutions at the 2026 Advanced Semiconductor Packaging & Chiplet Show (ASPS 2026), designed to address the rapid advancements in AI data centers. These materials aim to significantly enhance the performance and reliability of next-generation semiconductors.

Technical / Clinical Details

Central to Epsilon's announced material solutions is the "Die Attach Copper Paste (DACP)". This DACP was developed to tackle thermal management challenges in power semiconductor components. Compared to traditional materials, DACP remarkably improves heat dissipation while simultaneously contributing to reduced manufacturing costs. This is a critical attribute for the high-density and high-power semiconductors demanded by AI data centers. Furthermore, the company introduced electromagnetic interference (EMI) shielding materials and adhesives for ultra-miniature semiconductor devices. Particularly noteworthy is the Silver-Coated Copper (SCC) material, which offers excellent conductivity while suppressing oxidation, all while maintaining cost competitiveness. EMI shielding is indispensable for preventing signal interference in highly integrated chiplets, thus ensuring stable device operation. These materials serve as foundational technologies for realizing faster and more reliable semiconductor solutions in fields such as AI, high-performance computing (HPC), and 5G communication.

Background & Context

The explosive growth of AI and high-performance computing has brought unprecedented demand and technological challenges to the semiconductor industry. Semiconductors used in data centers, in particular, require higher power efficiency and superior thermal management capabilities to process vast amounts of data. Traditional packaging materials are increasingly struggling to meet these extreme demands, making the development of new material solutions an urgent imperative. Epsilon's announcement responds to these pressing industry needs, re-emphasizing the critical role that material suppliers play in the semiconductor ecosystem. South Korea, in particular, is one of the world's leading countries in semiconductor manufacturing and materials technology, and innovations from companies like Epsilon are expected to further enhance its competitive edge.

Strategic Significance & Outlook

The advanced packaging materials unveiled by Epsilon will be indispensable for the future development of AI semiconductors and the HPC sector. Improved thermal management and cost reduction through DACP will accelerate the adoption of power semiconductors and enhance the energy efficiency of data centers. Additionally, EMI shielding materials will enable further miniaturization and performance enhancement of chiplet technology, contributing to the realization of more complex Systems-in-Package (SiP). The widespread adoption of these materials is expected to boost the performance of next-generation AI accelerators and HPC processors, thereby driving advancements in various cutting-edge technologies such as autonomous driving, cloud computing, and edge AI. Epsilon is set to continue playing a vital role at the forefront of the semiconductor industry through its materials innovation.

Source: <https://www.thelec.net/news/articleView.html?idxno=13339>

#23 H.B. Fuller Board Unanimously Rejects Ancora's Acquisition Proposal for Building Adhesives Solutions Business, Citing Significant Undervaluation

Published August 24, 2026 Business Wire USA



OVERVIEW

H.B. Fuller Company's Board of Directors unanimously rejected an unsolicited acquisition proposal from investment firm Ancora for its Building Adhesives Solutions (BAS) business. The board determined that Ancora's proposal significantly undervalued the BAS business and disregarded its future growth and value creation potential. The company plans to continue its strategic review to assess the value of all business units. This decision reflects confidence in its core business and a commitment to long-term value pursuit.

Key Findings

The Board of Directors of H.B. Fuller Company has announced its unanimous decision to reject an unsolicited acquisition proposal from investment firm Ancora for its Building Adhesives Solutions (BAS) business. The Board concluded that the proposal significantly undervalued the true worth of the BAS segment.

Technical / Clinical Details

H.B. Fuller's Building Adhesives Solutions (BAS) business provides a comprehensive range of high-performance adhesive products for the architectural and construction industries. This includes tile adhesives, flooring adhesives, roofing adhesives, and various structural adhesives, all of which are highly regarded for their durability, ease of application, and environmental performance. Ancora's acquisition proposal was presumably based on a current financial valuation of the BAS business. However, H.B. Fuller's Board determined that the proposal failed to adequately reflect the BAS business's technological advantages, future market expansion potential, and its capacity for ongoing value creation through continuous research and development. Specifically, the global shift towards sustainability in the construction industry and the proliferation of new construction techniques, such as modular and prefabricated construction, are seen as significant growth opportunities for the BAS business, which the Board believes were not fully recognized by Ancora's offer.

Background & Context

The adhesives industry is a crucial sector that underpins a wide array of industries, including automotive, electronics, construction, and packaging. In the construction sector, there is a growing demand for improved energy efficiency, reduced construction times, and sustainable building materials, making adhesives an indispensable component for achieving these trends. As a leading specialty adhesive company, H.B. Fuller has a long history of providing innovative solutions. Acquisition proposals from activist investors like Ancora typically aim for short-term shareholder value maximization. However, H.B. Fuller's Board prioritized the long-term strategic value and growth potential of the BAS business, choosing to maximize its value as an independent entity. This decision demonstrates the company's commitment to sustainable growth and long-term shareholder value, rather than being swayed by immediate gains.

Strategic Significance & Outlook

H.B. Fuller's Board has articulated a strategy to continue growing the BAS business rather than selling it. This reflects strong confidence that the segment will continue to enjoy high market growth and make substantial contributions to the company's overall revenue and profitability. Moving forward, H.B. Fuller is expected to continue investing in innovation and strengthening its product portfolio to further solidify its leadership in the building adhesives market. While strategic reviews will continue across its business units, this specific decision provides clear direction for the independent growth of the BAS business and the enhancement of H.B. Fuller's overall long-term enterprise value. Through this approach, the company anticipates delivering sustainable value to its customers, employees, and shareholders.

Source: <https://www.businesswire.com/news/home/20260824547890/en/H.B.-Fuller-Board-Unanimously-Rejects-Unsolicited-Proposal-from-Ancora>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#24 Dymax to Showcase Advanced UV/LED Curing Adhesives for Battery & Electronics Manufacturing, Expand HLC Medical Portfolio at The Battery Show Europe 2026

Published August 20, 2026 Dymax USA



OVERVIEW

Dymax will unveil its latest UV/LED-curable adhesives and protective solutions tailored for battery and electronics manufacturing, alongside an expanded portfolio of low-viscosity HLC medical adhesives, at The Battery Show Europe 2026. These rapid-curing materials offer high-efficiency bonding and sealing, significantly enhancing productivity and reducing energy consumption in critical applications. The expansion into advanced medical-grade products further solidifies Dymax's position in high-growth, high-reliability markets.

Key Findings

Dymax announced its participation in The Battery Show Europe 2026, where it will feature its newest UV and LED-curable adhesives and protective solutions specifically engineered for battery and electronics manufacturing. Concurrently, the company will highlight the expansion of its High-Level Chemistry (HLC) adhesive portfolio for medical devices, including new low-viscosity offerings.

Technical & Clinical Details

- **UV/LED-Curable Adhesives:** These advanced light-curable materials are designed to address critical bonding and protection challenges in battery assembly, such as cell-to-cell bonding, thermal management, and sealing of electronic components. Their rapid cure times, often measured in seconds, allow for significant throughput increases and reduced energy consumption compared to traditional thermal cure methods. This is particularly advantageous for high-volume electric vehicle (EV) battery production, where speed and reliability are paramount.
- **Expanded HLC Medical Adhesives:** The enhanced HLC product line, now featuring lower viscosity options, is formulated for complex, miniaturized medical devices including wearables, diagnostic equipment, and surgical tools. These medical-grade adhesives meet stringent biocompatibility requirements (e.g., ISO 10993-10/-23 for sensitization and irritation, and ISO 10993-5 for cytotoxicity) and provide robust, reliable bonds for skin-contact applications and sensitive internal components, ensuring patient safety and device integrity.

Background & Context

The demand for high-performance adhesives is surging across several high-tech sectors. In the automotive industry, the transition to EVs necessitates advanced materials for battery construction that can withstand harsh operating conditions and optimize thermal management. Simultaneously, the proliferation of smart electronics, driven by 5G and AI, requires adhesives capable of precise bonding in densely packed, heat-sensitive environments. The medical device market continues to innovate with smaller, more sophisticated wearables that demand biocompatible, flexible, and durable bonding solutions.

Strategic Significance & Outlook

This showcase underscores Dymax's commitment to delivering cutting-edge adhesive solutions that cater to the evolving needs of high-growth industries. The company's focus on UV/LED curing technology positions it at the forefront of sustainable manufacturing, offering efficiency gains and a reduced environmental footprint. The strategic expansion of its medical portfolio also reflects a clear alignment with trends favoring minimally invasive and wearable health technologies, promising continued market relevance and growth.

Source: <https://dymax.cc/news-and-media.html>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#25 Olin and Huntsman Shareholders Approve All-Stock Merger to Form 'OlinHuntsman', Enhancing Global Adhesives & Sealants Competitiveness

Published August 25, 2026 Adhesives & Sealants Industry USA



OVERVIEW

Shareholders of Olin Corp. and Huntsman Corp. have approved the necessary proposals for an all-stock merger, paving the way for the creation of 'OlinHuntsman.' This strategic combination aims to significantly enhance competitiveness within the global adhesives and sealants industry. The new entity is poised to offer expanded value and services to customers by integrating diverse product portfolios and technical expertise.

Key Findings

Shareholders of Olin Corp. and Huntsman Corp. have given their approval for the proposals required for the all-stock merger of the two companies. This transformative merger is expected to significantly bolster the combined entity's competitive standing in the increasingly global adhesives and sealants industry, operating as 'OlinHuntsman.'

Technical & Business Details

- **Shareholder Approval:** The requisite shareholder proposals for both Olin and Huntsman were overwhelmingly approved, signaling strong investor confidence in the strategic rationale behind the merger.
- **Synergistic Integration:** Olin, a major producer of chlor alkali products, and Huntsman, a global manufacturer of specialty chemicals and adhesives, will combine their respective strengths. This integration is anticipated to create a broader product portfolio and a more robust technological platform, allowing 'OlinHuntsman' to serve a wider array of customer needs across various industries.
- **Market Position:** The merger is designed to improve the new company's ability to compete in a globalized market, particularly in high-growth segments such as automotive, aerospace, and construction, which demand high-performance adhesives and sealants. The consolidated operations are expected to yield economies of scale and drive innovation.

Background & Context

The chemical industry has seen a trend towards consolidation, with companies seeking to expand their scale and accelerate technological advancements through mergers and acquisitions. The adhesives and sealants market, in particular, is experiencing growth driven by new applications in electric vehicles (EVs) for lightweighting and advanced electronics. The Olin-Huntsman merger aligns with this trend, aiming to create a more efficient and diversified business structure capable of responding to evolving market demands.

Strategic Significance & Outlook

Upon completion, 'OlinHuntsman' plans to intensify investments in research and development, focusing on sustainable and environmentally friendly product innovations. The combined supply chain and sales network are expected to optimize service delivery to a global customer base, aiming for long-term growth and increased shareholder value. This merger is poised to have a significant impact on the competitive landscape of the specialty chemicals and adhesives markets.

Source: <https://www.adhesivesmag.com/articles/102610-shareholders-of-olin-and-huntsman-approve-merger>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#26 Indium Corporation to Unveil High-Reliability Power Device Packaging Solutions, Including SiC and Cu Sintering Pastes, at PCIM Asia 2026

Published August 20, 2026 Indium Corporation USA



OVERVIEW

Indium Corporation will showcase its next-generation high-reliability packaging solutions for power electronics at PCIM Asia 2026. Key offerings include InFORCE® MF pressure silver sintering paste for SiC die-attach and InBAKE™29 copper sintering paste for power discrete die-attach. These materials demonstrate superior die shear strength, thermal conductivity, and mechanical reliability, supporting pressureless batch oven sintering for efficient manufacturing. The presentation highlights Indium's commitment to advancing high-performance semiconductor packaging.

Key Findings

Indium Corporation announced it will showcase high-reliability packaging material solutions for next-generation power electronics at PCIM Asia 2026. Featured products include InFORCE® MF pressure silver sintering paste for silicon carbide (SiC) die-attach and InBAKE™29 copper sintering paste for power discrete die-attach. These materials are engineered to deliver exceptional die shear strength, thermal conductivity, and mechanical robustness, enabling highly efficient and reliable manufacturing processes for advanced power devices.

Technical & Product Details

- **InFORCE® MF Pressure Silver Sintering Paste:** This paste is specifically developed for SiC-based power devices, offering high thermal conductivity and strong die shear performance. It supports a pressure-applied sintering process, creating dense, void-free bonds critical for maintaining device reliability under high operating temperatures. This technology is vital for the longevity and performance of high-power SiC modules.
- **InBAKE™29 Copper Sintering Paste:** Designed for power discrete devices, this innovative copper sintering paste provides excellent thermal and electrical conductivity without requiring gold or silver plating on the die. It is compatible with pressureless batch oven sintering, which simplifies manufacturing processes and reduces production costs. InBAKE™29 effectively addresses the rigorous thermal management demands of wide-bandgap semiconductors like SiC and GaN.
- **Shared Advantages:** Both materials exhibit high resistance to thermal and mechanical stresses, ensuring stable device operation over extended periods. Their optimized cure profiles also contribute to increased manufacturing throughput and overall system efficiency, which are crucial for rapidly expanding markets.

Background & Context

The escalating demand for power electronics in applications such as electric vehicles (EVs), renewable energy systems, and industrial motor drives necessitates higher power density, greater efficiency, and enhanced reliability. The adoption of next-generation semiconductor materials like SiC and gallium nitride (GaN) requires advanced die-attach solutions that can effectively manage heat and ensure robust interconnections. Indium Corporation's new sintering pastes are direct responses to these industry demands, contributing significantly to thermal management and extending device lifespan.

Strategic Significance & Outlook

Indium Corporation aims to continue supporting technological innovation in the power electronics industry through these cutting-edge materials. The advancements in SiC and copper sintering technologies are expected to enable the development of smaller, more efficient power modules, playing a critical role in extending EV range and improving the efficiency of renewable energy infrastructure. The company plans to continue its robust R&D efforts to meet the evolving needs of the high-growth power electronics market.

Source: <https://www.indium.com/press-releases/indium-corporation-to-showcase-high-reliability-power-device-packaging-solutions-at-pcim-asia-2026/>

#27 Chase Corporation Acquires High-Performance Sealant and Adhesive Manufacturer Hylomar, Bolstering Specialty Materials Portfolio

Published August 26, 2026 ChemAnalyst USA



OVERVIEW

Chase Corporation has completed the acquisition of Hylomar Holdings Limited, a UK-based high-performance sealant and adhesive manufacturer. This strategic move significantly strengthens Chase's portfolio in specialty sealing and adhesive materials, expanding its product offerings across diverse end-use industries. Hylomar's over 60 years of expertise and extensive product range are expected to accelerate Chase's global market presence.

Key Findings

Chase Corporation announced the acquisition of Hylomar Holdings Limited, a prominent UK-based manufacturer of high-performance sealants and adhesives. This strategic acquisition is set to enhance Chase's position in the specialty sealing and adhesive materials sector, broadening its product offerings to diverse end-use industries including industrial, transportation, aerospace, power generation, and electronics markets.

Technical & Business Details

- **Acquired Entity:** Hylomar Holdings Limited has over 60 years of experience in developing high-performance sealing and adhesive materials. Its product range includes non-setting gaskets, silicone sealants, anaerobic adhesives, and structural adhesives, which are well-regarded in automotive, aerospace, and general industrial applications.
- **Chase's Strategic Expansion:** Through this acquisition, Chase Corporation aims to complement its existing lines of insulation materials, protective coatings, and adhesives, thereby expanding its presence in the specialty materials market. Hylomar's innovative products and technologies are expected to benefit from integration with Chase's global R&D and distribution networks, fostering further growth.
- **Market Impact:** This consolidation will establish Chase as a more comprehensive solution provider, enabling it to offer a wider range of high-performance materials to its customers. This creates a significant competitive advantage in markets increasingly demanding improved product performance, optimized manufacturing processes, and sustainability.

Background & Context

Mergers and acquisitions remain a key growth strategy in the specialty chemicals market, as companies seek to diversify product portfolios, strengthen technological capabilities, and expand their geographical reach. Hylomar's unique technologies, such as non-setting gaskets and anaerobic adhesives, are in high demand in applications requiring precise sealing. Chase's acquisition of Hylomar is a timely move to capitalize on these market trends and solidify its leadership in high-value specialty materials.

Strategic Significance & Outlook

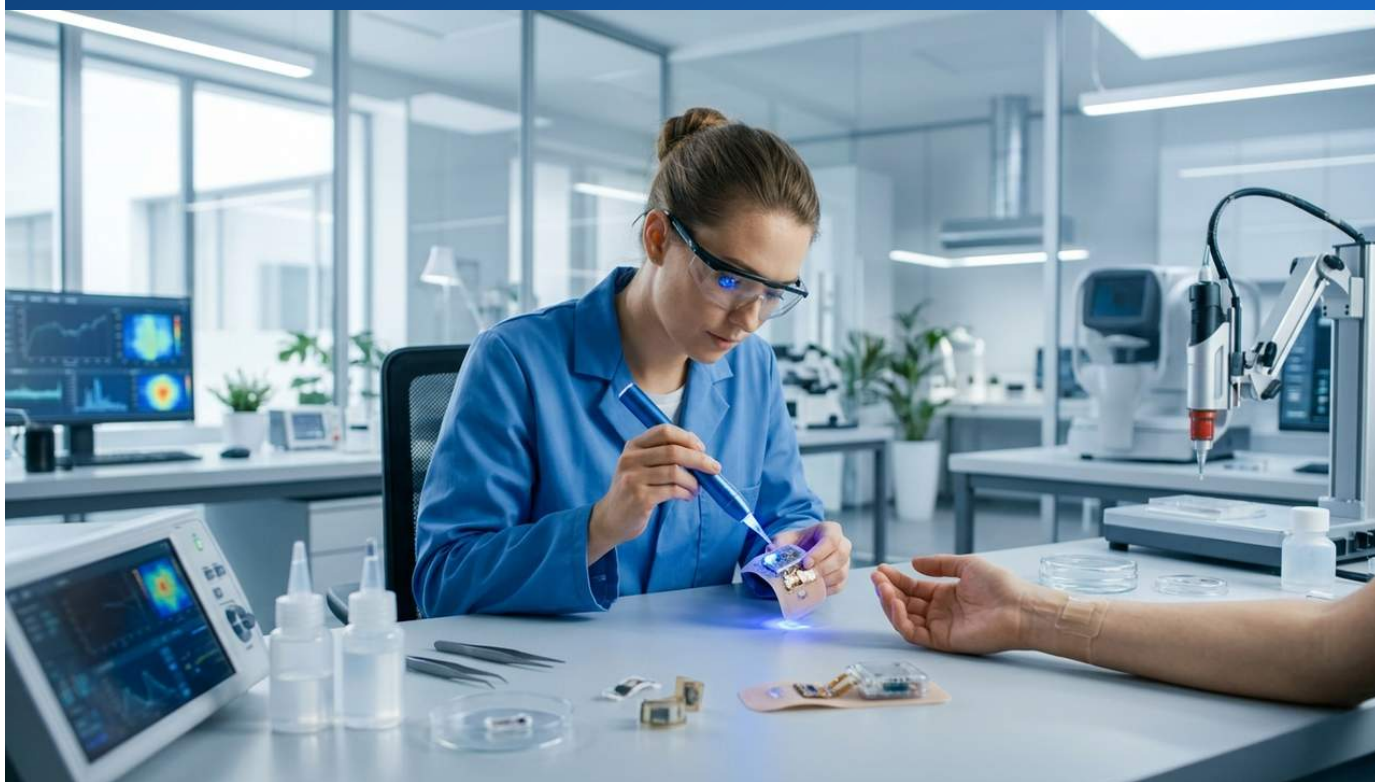
Chase Corporation plans to maintain Hylomar's existing brands and products while leveraging Chase's global sales channels and technical resources to accelerate market penetration. This synergy is expected to enhance both companies' innovation and customer service capabilities, leading to long-term growth and increased profitability. With the ongoing electrification of transportation and advancements in high-efficiency power generation systems, the demand for high-performance sealing and adhesive solutions is poised to grow, making this acquisition a robust foundation for Chase's future expansion.

Source: <https://www.chemanalyst.com/NewsAndDeals/NewsDetails/chase-corporation-expands-specialty-adhesives-44121>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#28 Dymax Unveils '2000-MW Series' UV-Curable Adhesives for Medical Wearables, Featuring IBOA- and TPO-Free Formulation

Published N/A Dymax USA



OVERVIEW

Dymax has launched its '2000-MW Series' of light-curable, medical-grade adhesives specifically developed for wearable medical device assembly. Formulated without isobornyl acrylate (IBOA), a known skin irritant, and TPO, a substance of concern, the series is designed to be skin-friendly and safe for direct skin contact applications. Having passed ISO 10993-10/-23 (sensitization and irritation) and ISO 10993-5 (cytotoxicity), these adhesives ensure high reliability and robust bonding performance.

Key Findings

Dymax has announced the release of its '2000-MW Series' of light-curable, medical-grade adhesives, specifically formulated for the assembly of wearable medical devices. This new series is notable for its composition, which is free from isobornyl acrylate (IBOA), a common skin irritant, and TPO, a photoinitiator often flagged as a substance of concern. This design ensures the adhesives are safe for direct skin contact applications.

Technical & Product Details

- **Biocompatibility and Safety:** The 2000-MW Series has successfully passed ISO 10993-10/-23 testing for sensitization and irritation, as well as ISO 10993-5 for cytotoxicity. These certifications confirm the skin-friendly properties, making them suitable for long-term wearable devices and other medical applications where patient safety is paramount.
- **High-Performance Adhesion:** These adhesives provide strong bonds, flexibility, and durability, meeting the stringent performance requirements of medical devices. As light-curable materials, they offer rapid curing in seconds, significantly accelerating manufacturing processes and improving production efficiency.
- **Application Areas:** The series is ideal for assembling a wide range of wearable medical devices, including continuous glucose monitors, heart rate sensors, drug delivery patches, and various diagnostic and therapeutic wearables. They demonstrate excellent adhesion to diverse substrates such as plastics, metals, and glass, commonly used in these devices.

Background & Context

The wearable medical device market is experiencing rapid growth, driven by advancements in telehealth and increasing interest in personal healthcare. These devices demand miniaturization, lightweighting, flexibility, and above all, high biocompatibility and reliability. Traditional adhesives have sometimes faced limitations in medical applications due to ingredients that could cause skin irritation or allergic reactions. The Dymax 2000-MW Series addresses these challenges, enabling safer and higher-performing product development.

Strategic Significance & Outlook

The introduction of Dymax's 2000-MW Series provides medical device manufacturers with a crucial option for developing next-generation wearable technologies. The skin-friendly formulation combined with high reliability enhances patient comfort and safety, while also boosting product competitiveness in the market. This innovation is expected to accelerate advancements across broader medical fields, from diagnosis to therapy, further solidifying Dymax's leadership in the medical adhesive market.

Source: <https://dymax.cc/medical-wearables-device-assembly.html>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#29 Henkel Develops 'Technomelt AS 4004' Hot-Melt Adhesive to Prevent Damage During Roof Tile Transportation

Published August 21, 2026 EuropaWire Germany



OVERVIEW

Henkel has announced 'Technomelt AS 4004,' an innovative hot-melt adhesive designed to mitigate micro-scratches, chipping, and coating damage during roof tile transportation. This polypropylene-based adhesive offers low processing temperatures, reduced energy consumption, extended application head life, minimal dust generation, and high temperature stability. Supporting fully automated application at up to 140 tiles/minute, it can be peeled cleanly from painted surfaces, enhancing both manufacturing efficiency and product quality.

Key Findings

Henkel has unveiled 'Technomelt AS 4004,' an innovative hot-melt adhesive solution engineered to effectively reduce micro-scratches, chipping, and coating damage to roof tiles during transportation. This polypropylene-based adhesive boasts properties that significantly improve both efficiency and sustainability within the manufacturing process.

Technical & Product Details

- **Polypropylene-Based Hot-Melt Adhesive:** Technomelt AS 4004 functions as a temporary spacer to protect the surface of roof tiles during transit. Its unique formulation provides excellent adhesive performance at low processing temperatures, and it can be easily peeled off after use without leaving residue on painted or coated surfaces.
- **Enhanced Manufacturing Efficiency:** The adhesive facilitates reduced energy consumption due to its low processing temperature. It also contributes to longer application head life and minimal dust generation, leading to less production line downtime. Furthermore, it supports fully automated application at high speeds, up to 140 roof tiles per minute, dramatically improving efficiency in large-scale production.
- **High Temperature Stability:** Technomelt AS 4004 exhibits high temperature stability, capable of withstanding fluctuations in transit environments, thus ensuring consistent adhesive performance. This characteristic reduces the risk of tile damage across various climatic conditions during transportation.

Background & Context

For the roof tile manufacturing industry, maintaining product quality during transportation has been a long-standing challenge. Micro-scratches and chipping can compromise both the aesthetic appeal and functional integrity of products, ultimately affecting customer satisfaction and brand image. Traditional protective materials and packaging methods often incur high costs and environmental burdens. Henkel's Technomelt AS 4004 offers a high-performance and sustainable solution to these challenges, providing significant benefits for roof tile manufacturers.

Strategic Significance & Outlook

The introduction of Technomelt AS 4004 is expected to raise the standard for transportation quality within the roof tile industry while accelerating automation and efficiency in manufacturing processes. Through this product, Henkel further strengthens its position as a leader in adhesive solutions for the construction materials market. Sustainable materials and improved production efficiency are essential for companies to gain a competitive edge in today's global market, and Technomelt AS 4004 is poised to contribute on both fronts.

Source: <https://www.facebook.com/EuropaWire/posts/henkel-expands-roofing-adhesives-portfolio-with-new-hot-melt-spacer-solution-hen/1679547444172508/>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#30 Incure Unveils 'Optik™ HTE-6486' Dual-Cure UV Optical Adhesive for Stable Optical Alignment and High Reliability

Published N/A Incure Singapore



OVERVIEW

Incure offers 'Optik™ HTE-6486,' a high-performance light-curable epoxy designed for bonding precision optical components. This adhesive provides excellent thermal shock resistance and ultra-low shrinkage, ensuring complete stability of optical alignment over time. Featuring a dual-cure mechanism, it achieves maximum reliability by eliminating internal stresses through rapid UV fixation followed by thermal post-cure, thereby enhancing the performance and lifespan of high-precision optical devices.

Key Findings

Incure has introduced 'Optik™ HTE-6486,' a high-performance light-curable epoxy designed specifically for bonding precision optical components. This adhesive is characterized by its superior thermal shock resistance and exceptionally low shrinkage, guaranteeing complete stability of optical alignment over extended periods. By employing a dual-cure mechanism, it effectively eliminates internal stresses, achieving the highest levels of reliability.

Technical & Product Details

- **Dual-Cure Mechanism:** Optik™ HTE-6486 first undergoes rapid tacking and preliminary bonding with UV light in just seconds. Subsequently, a low-temperature thermal post-cure (e.g., 30 minutes at 80°C) is applied to fully relieve any residual stresses within the adhesive. This two-stage curing process minimizes distortion during hardening, crucial for maintaining precise optical alignment.
- **Ultra-Low Shrinkage and Thermal Shock Resistance:** The adhesive exhibits extremely low shrinkage after curing, preventing misalignment and distortion between optical components. It also demonstrates excellent durability in rigorous thermal shock tests (e.g., cycles from -40°C to 125°C), making it suitable for optical devices used in wide temperature ranges, such as automotive, aerospace, and medical equipment.
- **Optical Properties and Adhesion:** Optik™ HTE-6486 boasts high light transmittance and low yellowing, ensuring optical performance is maintained over long periods. It provides strong and stable adhesion to various optical materials, including glass, metal, and plastic, enhancing the reliability of bonded interfaces.

Background & Context

The demand for high-precision optical devices is rapidly expanding across diverse fields, including smartphones, AR/VR headsets, automotive sensors, and medical diagnostic equipment. In these devices, even slight misalignment of optical components directly impacts performance, requiring adhesives with extremely high precision and long-term stability. While conventional UV-curable adhesives offer fast curing, stress generation due to cure shrinkage has sometimes been a challenge. Incure's Optik™ HTE-6486 addresses this issue, improving the reliability of next-generation optical devices.

Strategic Significance & Outlook

The introduction of Optik™ HTE-6486 has the potential to establish a new standard for bonding technology in precision optical assemblies. This adhesive contributes to streamlining manufacturing processes and improving the performance and lifespan of final products. Through this dual-cure technology, Incure aims to strengthen its leadership in the high-performance optical device market and is expected to continue providing further advanced optical solutions through ongoing research and development.

Source: <https://www.incurelab.com/adhesives/uv-adhesives/uv-optical-adhesives/>

Collected: August 28, 2026 | Automated Research System (Gemini API)

#31 US FTC Wins Court Battle, Blocks Henkel's Proposed \$725M Acquisition of Liquid Nails

Published August 21, 2026 Cooley USA



OVERVIEW

On August 17, 2026, the U.S. Federal Trade Commission (FTC) successfully blocked Henkel's proposed acquisition of PPG's Liquid Nails business in court. The FTC argued that the merger would eliminate competition in the construction adhesives market, leading to higher prices, reduced quality, and stifled innovation. The U.S. District Court sided with the FTC, issuing a permanent injunction to completely prevent the acquisition. This ruling clearly demonstrates the FTC's aggressive stance on antitrust enforcement.

Key Findings

On August 17, 2026, the U.S. Federal Trade Commission (FTC) announced a court victory, successfully blocking Henkel's planned USD 725 million acquisition of PPG's Liquid Nails business. The U.S. District Court fully supported the FTC's arguments, issuing a permanent injunction that found the merger would substantially lessen competition in the construction adhesives market.

Legal & Business Details

- **FTC's Argument:** The FTC contended that if Henkel acquired Liquid Nails, it would lead to increased market concentration and reduced competition within the construction adhesives market, particularly in the DIY and professional segments. The agency argued that consumers would likely face higher prices, fewer product choices, diminished quality, and stifled innovation.
- **Court's Ruling:** The U.S. District Court accepted the market analysis and evidence presented by the FTC regarding the merger's impact on competition, concluding that the acquisition violated antitrust laws. The ruling mandated a permanent injunction to prevent the competitive harm that would have resulted from the merger's completion.
- **Transaction Value:** The acquisition was initially valued at USD 725 million and was intended to significantly expand Henkel's construction adhesive portfolio.

Background & Context

In recent years, the FTC and the Department of Justice have intensified their antitrust enforcement efforts, with a notable focus on blocking mergers to protect consumer interests. The construction adhesives market has seen steady growth, supported by demand from residential construction, renovations, and infrastructure development. This market is dominated by a few key players, and further consolidation could significantly alter the competitive landscape. This ruling indicates that regulatory bodies are highly vigilant against the expansion of market power by large players.

Strategic Significance & Outlook

This court decision represents a significant setback for Henkel's expansion strategy in the North American construction adhesives market. It is also expected to influence future M&A reviews by regulatory authorities, with major acquisitions in highly concentrated sectors likely facing stricter scrutiny. Companies planning mergers and acquisitions will need to conduct more cautious antitrust risk assessments than ever before. This is expected to ensure the maintenance of healthy market competition, thereby protecting consumers and fostering innovation.

Source: <https://www.cooley.com/news/insight/2026/2026-08-21-ftc-court-win-blocks-henkels-725m-bid-for-liquid-nails>

Collected: August 28, 2026 | Automated Research System (Gemini API)