The secret to a better mattress? High-performance polymers

As a manufacturer in industries like mattresses, furniture, automotive interiors, textiles or hygiene, you know that creating high-quality products requires more than just the right base materials. A critical element behind the durability, comfort, and sustainability of these products is fabric reinforcement and lamination using high-performance polymers. These advanced materials ensure the longevity and efficiency of textile products, offering unmatched bonding capabilities, especially in fabric applications, along with significant sustainability benefits.

Excellent thermal stability and a healthier sleep with low odor & low VOC advantage of Licocene™ polymers

Clariant's Licocene polymers, particularly the Licocene PP 1602, PP 2402, PP 2502 PP 2602, and PP 3602, have redefined the standards in hot melt polymers used in mattress production. Unlike traditional EVA-based adhesives, these polypropylene-based materials offer superior bond strength and thermal stability without the need for additional additives like tackifiers or plasticizers. This leads to a reduction in VOC emissions and negligible odor, both during manufacturing and in the final product, ensuring a healthier and more comfortable sleeping environment for consumers.

Cost-efficient production through reduced material use

One of the standout features of Licocene polymers is their ability to reduce material and energy consumption during the application process. These polymers allow for more precise placement, meaning manufacturers can use less adhesive while maintaining strong bonds, leading to significant cost savings. Additionally, the low viscosity of these adhesives facilitates the use of smaller nozzles, which further enhances productivity by reducing downtime for maintenance and allowing for faster line speeds.

Full-service solutions for mattresses

Clariant's Licocene polymers offer a comprehensive solution for manufacturers throughout the entire production process. From the initial product development phase to the final assembly, these polymers ensure superior comfort and durability while meeting the increasingly strict environmental standards of today's market. As engineered solutions, Licocene polymers are designed to improve every facet of mattress manufacturing, providing manufacturers with the tools they need to create high-quality, sustainable products that meet consumer demands and regulatory requirements.

How Clariant's innovations enhance mattress quality and durability:

Mattress ticking
The ticking is the first line of defence against wear and tear. Clariant's Licocene PP 2602 or PP 3602 polymers are used to coat and laminate the woven ticking fabrics, locking the fibers in place to prevent seam slippage and fraying over time. This layer also allows for custom enhancements like water resistance, antimicrobial properties, and more.

Pocket spring
Premium innerspring mattresses rely on pocket coils for customized support. Clariant's Licocene PP 2402 and PP 2502 hot melt polymers are exceptional at fusing the fabric pockets to create the pocket spring structure. These polymers offer remarkable cohesive strength while maintaining low viscosity, allowing them to thoroughly permeate all non-woven layers. The result is a durable, consistent bond that enhances the overall quality of the mattress. This innovative bonding solution ensures that the pocket coil system maintains its integrity, contributing to the mattress's long-term performance and comfort.

Foam bonding
For mattresses featuring foam comfort layers or cores, Clariant's new Licocene polymers demonstrate superior adhesion for bonding different foam components together. This ensures the mattress maintains its structural integrity over years of use. Additionally, these Licocene polymers contribute to reduced noise levels in the finished mattress, enhancing the overall sleep experience by minimizing disturbances from movement.

Anti-slip protection

The last thing you want is your mattress sliding around. Licocene PP 1602 provides excellent anti-slip properties without leaving any sticky residue, keeping your mattress securely in place on smooth surfaces.

Renewable-based solutions and enhanced recycling capabilities
The Licocene Terra range is made from renewable instead of fossil-based raw materials via biomass balance certification. Some Licocene solutions also enable mono-material construction for easier recycling at end of life.

In addition to offering renewable-based solutions, selected products within Clariant's Licocene portfolio are OEKO-TEX® ECO PASSPORT certified. This certification ensures that these hot melt adhesives meet stringent environmental and safety standards, making them an ideal choice for manufacturers focused on more sustainable textile production. By using these certified adhesives, mattress and textile manufacturers can confidently create products that align with eco-friendly practices and meet the growing consumer demand for more sustainable products.

Meeting the needs of a modern industry
With the rising demand for more eco-friendly and efficient manufacturing processes, Clariant’s Licocene polymers offer a forward-thinking solution. Whether it's for mattress ticking, pocket spring assembly, foam bonding, or anti-slip, these polymers provide the necessary performance enhancements while aligning with the industry's sustainability goals to not only improve the quality of their products, but also reduce the impact on the environment.

The next time you invest in a new mattress, you can rest easy knowing Clariant's advanced polymer solutions are hard at work behind the scenes, enhancing durability, and comfort for years of great sleep.