

LANXESS at the Munich Adhesives and Finishing Symposium, October 28 – 30, 2019, Munich, Germany

# **Customized Low Free isocyanate prepolymers** for reactive hot melt systems

- Presentation on advancements in Low Free (LF) isocyanate prepolymer design for reactive hot melt systems
- Novel insights allow the synthesis of LF MDI prepolymers with NCO content up to 10%
- Higher functionality for improved performance and processing
- LF technology for low monomer adhesives and sealants (< 0.1 wt.% free diisocyanate content)

**Cologne** – Specialty chemicals company LANXESS will attend the 44th Munich Adhesives and Finishing Symposium (MKVS) in Munich, Germany, this year with an expert presentation. The "Advancements in low free (LF) isocyanate prepolymer design for reactive adhesive systems" will be presented by Gerald King, Head of Technical Services and Application Development Europe, at LANXESS' Urethane Systems business unit.

LANXESS Urethane Systems has developed unique prepolymers with < 0.1 wt.% free MDI (methylene diphenyl diisocyanate) and other isocyanates that are used for hot melt adhesives among others in the automotive, construction, electronics and bookbinding industries. This low monomer technology offers outstanding technical performance, exceptional processability and productivity, as well as environmental, health and safety benefits.

In addition to a deep insight into the low free isocyanate prepolymer chemistry, the presentation focuses on the design of low monomer prepolymers for reactive adhesives with a balance between viscosity and NCO content. "The established way for low monomer hot melts today is a lengthy process with limited flexibility – our approach aims

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for a flexible formulation platform with customized properties for improved performance and reduced complexity," says King. "Our newly developed prepolymers can achieve high NCO content and higher functionality for superior adhesive performance."

These LF prepolymers are available for all isocyanate and polyol chemicals, including special isocyanates such as IPDI (isophorone diisocyanate), HDI (hexamethylene diisocyanate) and pPDI (p-phenylene diisocyanate). The latter offers excellent solvent resistance and exceptional high temperature performance. The portfolio also includes a number of polyols such as polyethers, polyesters, polycaprolactones and polycarbonates. LANXESS' development focus lies on expanding this LF technology in terms of isocyanates, polyols, range of performance and applications.

The Munich Adhesives and Finishing Symposium is established as the leading independent event in the fields of adhesives, printing and converting industry with changing focus area, e.g. pressure sensitive adhesives, hot melt adhesives and other adhesive systems. It is well respected among development technologists and technical sales representatives from industry, universities and scientific institutes from all over the world as a forum for knowledge sharing and networking. At this year's event the focus lies on exchanging insights into the most recent development results and latest technological trends regarding base materials, converting and application of hot melts, hot melt PSAs and extrudable films.

LANXESS is a leading specialty chemicals company with sales of EUR 7.2 billion in 2018. The company currently has about 15,400 employees in 33 countries and is represented at 60 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

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# Image



At this year's Munich Adhesives and Finishing Symposium, LANXESS will be presenting "Advancements in low free (LF) isocyanate prepolymer design for reactive adhesive".

Photo: LANXESS AG

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