

LANXESS at UTECH Europe 2018, May 29 - 31, MECC Maastricht, The Netherlands, Stand 904

### **Bundled competence for the PU industry**

- **New developments in flame retardants, anti-hydrolysis additives, and urethane prepolymers for elastomers, coatings, adhesives and sealants**
- **Low free isocyanate content prepolymers**
- **Material alternatives to MbOCA-cured elastomers**
- **New blocked cast elastomer systems for very large parts**

**Cologne** – Specialty chemicals company LANXESS will be showcasing its premium products for the polyurethane industry at UTECH Europe 2018 from May 29 to 31. The new Urethane Systems business unit will be represented at the conference for the first time. “We want to use this major event in the global polyurethane industry primarily to strengthen our position as a customer-focused urethane systems provider. The focus is on our broad range of prepolymers with very low free isocyanate content. This technology opens up new opportunities for our customers, especially in terms of performance and safety,” explains Dr. Markus Eckert, Head of Urethane Systems. Other key topics include material alternatives to MbOCA-cured cast systems and blocked systems for a range of cast and coating applications.

As one of the leading manufacturers of bromine and phosphorus based flame retardants, LANXESS’s Additives business unit offers solutions for all types of polyurethanes. The product innovations presented at UTECH Europe include flame retardants, plasticizers, crosslinkers, catalysts and hydrolysis stabilizers. The focus there is on new flame retardant solutions from the Levagard, Disflamoll and Reofos product ranges, which have proven themselves in rigid and flexible foam applications based on polyurethane. The business unit also introduces Stabaxol L, the first product in a new range of low-emission hydrolysis stabilizers. “Our new oligomeric flame retardant

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Page 1 of 5

solutions can help address the increasing requirements for flexible foams and meet our customers' demands for low fogging and low emission additives," explains Dr. Heiko Tebbe, Manager Application Technology Polymer Additives at the LANXESS Additives business unit.

### **Urethane Systems: Broad portfolio of low free (LF) isocyanate prepolymers**

Compared to other manufacturers, LANXESS Urethane Systems has one of the broadest portfolios of prepolymers with low free isocyanate content for cast elastomers. Adiprene LF prepolymers are based on TDI, MDI, HDI, IPDI, and pPDI diisocyanates, with free monomer content usually below 0.1 percent. "Our low free prepolymers meet the latest regulatory standards with regard to health, safety and environmental protection, so that the processor can minimize required protective measures. At the same time, they help our customers to improve the mechanical performance of elastomer components and to produce them economically," explains Eckert.

### **Better properties than MbOCA-cured elastomers**

In particular, Adiprene LF MDI prepolymers, together with the aromatic diol curing agent Vibracure 2101, are an alternative to TDI and LF TDI prepolymers cured with MbOCA (4,4'-Methylene-bis(2-chloroaniline)). The use of MbOCA within EEA countries has recently been severely restricted and regulated by the European chemicals regulation REACH. "Our urethane systems meet all REACH requirements, and produce elastomers with high elasticity and improved resistance to abrasion, impact, and hydrolysis, while using the same processing equipment. In addition, they are easier to process because of their lower viscosity," says Eckert. The pot life can be long to help with molding large parts, and can be catalyzed for higher productivity.

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Page 2 of 5

### **Controlled curing with blocked prepolymers**

New Adiprene K blocked prepolymers are available with curing agents to make customer-specific, fully-formulated reactive systems. Curing of these prepolymers is triggered at a precisely defined temperature resulting in a controlled cure. "With these systems, we are targeting large and complex parts and manual processing, which is used for very low volume production," says Eckert. These prepolymers have inherently good industrial hygiene, as there is no free isocyanate due to the blocking. Potential applications include the impregnation of fabric belts, abrasive pad binders or the coating of industrial rollers. The systems are also suitable for rotational molding and liquid injection molding.

### **Global urethane systems provider**

Urethane Systems was formed following the acquisition of Chemtura by LANXESS. Eckert: "We see ourselves as a systems provider to the global polyurethane industry. Our offering includes comprehensive systems for cast elastomers, coatings, adhesives and sealants." The business unit is one of the world's leading suppliers of conventional and low free prepolymers and special aqueous polyurethane dispersions (PUDs). "A particular focus is placed on solvent- and monomer-free systems. For example, we have developed a new low free MDI prepolymer specifically for adhesives and sealants with isocyanate content of less than 0.1 percent," Eckert explains.

### **Additives: New flame retardants and hydrolysis stabilizers**

Urethane Systems shares the stand at UTECH Europe with the LANXESS Additives business unit. The innovative halogen-free flame retardants are based, among other things, on a newly developed phosphorus chemistry. One product example are the phosphate esters of the Disflamoll and Reofos series, which have proven themselves, for example, in rigid and flexible foam applications based

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Page 3 of 5

on polyurethane as well as in coatings, adhesives and sealants. They combine plasticizing with flame retardant properties.

The Additives business unit also introduces Stabaxol L, the first product in a new range of low-emission hydrolysis stabilizers. It is particularly suitable for polyester/poly lactone polyols, thermoplastic polyurethanes (TPU) and other PU elastomers. The product is liquid and of low-viscosity at room temperature – therefore it is easy to dose and process without prior heating.

LANXESS is a leading specialty chemicals company with sales of EUR 9.7 billion in 2017 and about 19,200 employees in 25 countries. The company is currently represented at 74 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. Through ARLANXEO, the joint venture with Saudi Aramco, LANXESS is also a leading supplier of synthetic rubber. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

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Page 4 of 5

## News Release

found at <http://globe360.net/broadcast.lanxess/>.

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Page 5 of 5

## Image



LANXESS's new Urethane Systems business unit is participating in UTECH Europe for the first time. The focus is on its broad range of urethane prepolymers with very low free isocyanate content. These prepolymers and systems are used across a wide range of demanding applications.

Photo: LANXESS AG