

New perspective to the CPU world

LANXESS Adiprene LF technology enables injection molding of cast PU elastomers

- **Higher output and cost efficiency**
- **Adiprene C930 offers outstanding properties of mining screen**
- **Enhanced waste management**

Cologne – Adiprene C930, a unique Low Free MDI based cast urethane from specialty chemicals company LANXESS, has just proven as an appropriate material for being processed via injection molding.

The Korean company Autox developed a production process that allows cast polyurethane to be injection molded. This innovation brings a new perspective to the cast polyurethane (CPU) world as it combines the processing advantages of injection molding along with the properties of cast urethane. Autox has recently launched a new vibrating screen for the mining industry which is made from this Adiprene cast PU prepolymer by injection molding.

Advantages of injection molding

One of the benefits in working with injection molding is the high production output rate that makes the process highly efficient and cost-effective. In a limited amount of time and with a single mold, more parts can be manufactured. Cost efficiency is also influenced by labor cost which is typically lower than in pour casting. As an example, the current production time of an injection molded mesh screen is five minutes, while the pour casting process will normally take 35 minutes to manufacture the screen. Adiprene LF (Low Free) prepolymer delivers improved industrial hygiene, along with ease of processing. It offers a perfect fit with the injection molding process, as the viscosity is lower than of a conventional prepolymer.

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Increased life span and screening efficiency

Vibrating screen mesh is a highly demanding application needed to withstand challenging mining operation conditions. The Adiprene C930 mining screen offers outstanding abrasion resistance and rebounding properties, improving the lifetime and screening efficiency of the part. Results of this caprolactone based technology have been supported by field testing, it has been proven that the lifetime of the screen can be up to three times longer than the market high quality reference. This unique development allows less downtime in the mine operation leading to maintenance savings.

Improved waste management

Autox' new development allows the processing of cast PU prepolymers, thus the molded part presents greater performance. Complex shape parts are easier to mold as the pressure needed for the injection allows the flow to get into the part details. The injection process answers one of the main concerns of the industry: waste management, as it also allows for better quality consistency, leading to less trimmings but also less waste from reduced scrap.

While Autox and LANXESS with its Adiprene C930 source material have proven that great achievement can be made on injection molding polyurethane for mining screen, both companies are confident that others applications can also benefit from this development.

LANXESS is a leading specialty chemicals company with sales of EUR 7.2 billion in 2018. The company currently has about 15,500 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.

Autox is a Korean company established in 1983, Autox is specialized in rubber spare parts especially for construction equipment. Core business is providing solutions for

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News Release

emerging challenges and the application of ever-evolving technologies. Autox currently exports 63 countries and 259 companies.

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Forward-Looking Statements

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You can find further information concerning LANXESS chemistry in our WebMagazine at <http://webmagazine.lanxess.com>.

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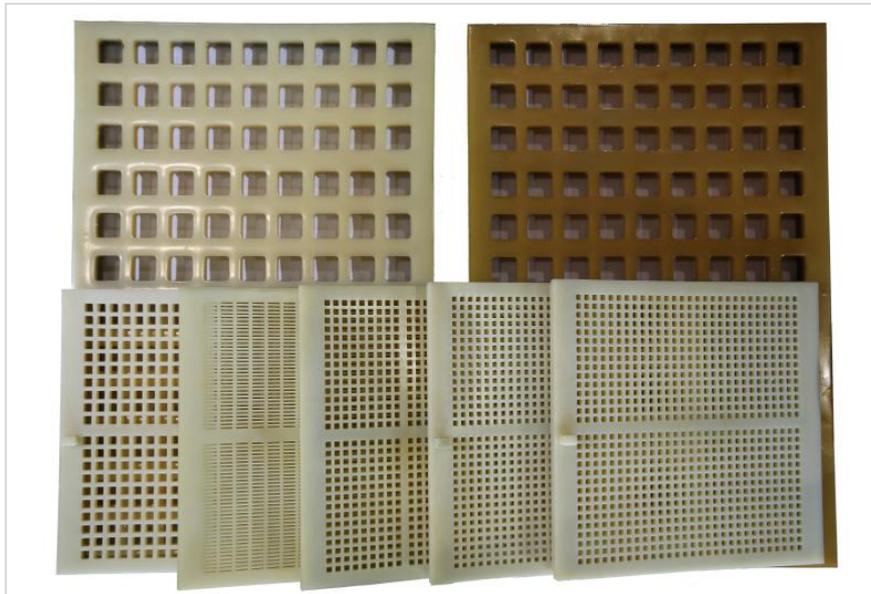
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Image



Innovative processing of cast polyurethanes: Autox' new mining screens are manufactured for the first time by injection molding from the prepolymer Adiprene LF (Low Free) provided by LANXESS.
Photo: LANXESS AG

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