

### LANXESS at Expobor 2014 in São Paulo, Brazil

## Alternative Curing Process for EPDM Rubber

**Cologne/São Paulo** – LANXESS, one of the world's leading manufacturers of synthetic rubber, will showcase at EXPOBOR 2014 a broad range of products for the rubber transformation, automotive, tire, and civil construction industries, among others. The event is Latin America's largest rubber fair, taking place from April 23 to 25 at Expo Center Norte, in São Paulo.

At this year's edition of Expobor, LANXESS Keltan Elastomers business unit will present an innovative curing technology for EPDM rubber. The basic finding of LANXESS' rubber experts is that zeolite can be used as a new co-activator for resol curing, enabling both high cure speed and high curing efficiency. Resol curing opens up an alternative approach of EPDM rubber processing besides established sulphur vulcanisation and peroxide curing which are the main crosslinking technologies for EPDM rubber.

So far, resol curing could be designated as the "work horse" for the dynamic vulcanisation of EPDM/PP-based thermoplastic vulcanisates (TPVs). However, for thermoset vulcanisation of EPDM it is hardly used, because it is considered to be too slow and suffers from marching cure.

Dr. Niels van der Aar, Head of Technical Service & Application Development at Keltan Elastomers, explains: "Although emphasis of our studies is on the activation of various resol curing systems for EPDM rubber, it is also shown that this novel way of activation is applicable for resol cure of other types of rubber, including (X)IIR, CR, (H)NBR, BR, SBR and NR."

Depending on the particular resol curing system and rubber under investigation, the cure rate is strongly increased. This means a reduction of scorch and vulcanisation times up to 75 per cent.

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Furthermore, the final degree of crosslinking is clearly enhanced – almost up to the double value.

“Resol curing can now be considered as a realistic alternative to sulphur and peroxide curing systems making curing at lower temperatures possible and giving e.g. improved heat aging properties,” says van der Aar. “Finally, it will also be shown that zeolite activation is effective not only for the thermoset vulcanisation of EPDM, but also for the dynamic vulcanisation of EPDM-based TPVs, enabling a reduction of the resol content and, thus, improving the TPV color characteristics.”

Keltan Elastomers is the preferred partner for innovations and bringing new solutions to customers supported by an extensive, global, technical service network, supplying the best grades to support this new solution.

This year, LANXESS will be represented by the business units: Performance Butadiene Rubbers (PBR), Keltan Elastomers (KEL), Rhein Chemie (RCH), Butyl Rubber (BTR), High Performance Elastomers (HPE) and Rubber Chemicals (RUC).

These six business units will bring high quality raw materials with excellent processability characteristics which are regularly used in the following applications: tire treads, inner tubes, conveyor belts, shoe soles, pharmaceutical lids, protective clothing, modifiers of plastics and adhesives, engineering cables, seals and hoses, among others.

LANXESS is a leading specialty chemicals company with sales of EUR 8.3 billion in 2013 and roughly 17,300 employees in 31 countries. The company is currently represented at 52 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals. LANXESS is a member of the leading sustainability indices Dow Jones Sustainability Index (DJSI World and DJSI Europe) and FTSE4Good as well as CDP's Climate Disclosure Leadership Index (CDLI).

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## News Release

### **Forward-Looking Statements.**

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### **Information for editors:**

#### **More information on Keltan Elastomers**

[www.Keltan.com](http://www.Keltan.com)

All LANXESS news releases and their accompanying photos can be found at <http://press.lanxess.com>. Recent photos of the Board of Management and other LANXESS image material are available at <http://photos.lanxess.com>. The latest TV footage, audiofiles and podcasts can be found at <http://multimedia.lanxess.com>.

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

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