

### Flame retardants from LANXESS: Innovative and safe

## Well equipped when the worst comes to the worst

**Leverkusen** – Specialty chemicals group LANXESS is bringing a complete range of flame retardance solutions for the plastic and rubber sector to “K” 2010. LANXESS’ presence at this year’s show centers on a number of innovative products such as the new Bayfomox spray foam system and Disflamoll TP LXS 51036, an odor-neutral flame retardant for PVC-based artificial leather products. Other flame retardants of interest at this year’s stand include a range of halogen-free flame retardants that respond to the growing demand for alternatives to problematic additives. For example, Disflamoll DPK exhibits an exceptionally low o-cresol content and Levagard DMPP is a good substitute for dimethyl methylphosphonate, DMMP, which must be labeled as “toxic” according to EU regulations.

The tried-and-tested flame-retardant construction material Bayfomox can now also be applied as a spray foam. This is the result of a close collaboration between LANXESS and Haan-based German company FluidSystems GmbH & Co. KG. Even when applied in thin layers, Bayfomox spray foams – like already well-established Bayfomox molded-foam parts – exhibit outstanding fire endurance in addition to a range of additional benefits. For example, they can be applied quickly and easily on site using small sprayers, are ideal even for complex surfaces and dry exceptionally quickly. As a result, they cut downtime when used, for example, as a low-cost treatment for existing high-traffic warehousing facilities. Moreover, Bayfomox spray foams deliver improved thermal insulation and additional soundproofing qualities compared with conventional intumescent coatings. And, by altering mixing conditions, users can also make significant adjustments to the mechanical and acoustic properties of the Bayfomox spray foam system.

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Disflamoll TP LXS 51036 has been developed specifically to enhance the flame retardance of PVC-based artificial leathers. The stand-out feature of this new product is that it combines a flame-retardant action with plasticizing properties. The latter gives the artificial leather an attractive flexibility and much sought-after elastic properties. Despite the addition of these properties, the distinctive odor of artificial leather is unaffected. What's more, the new product gels quickly, thereby helping to speed up the production of artificial leather and cut the associated energy consumption.

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Levagard DMPP is a highly effective, halogen-free flame retardant with an extremely high phosphorus content. Due to its low viscosity, it is ideal for use in rigid foam materials, coatings, adhesives, epoxy resins and other thermosetting plastics. As a result of its excellent flowability, it can also replace plasticizing mineral oils that would increase fire load if the worst came to the worst. In addition, Levagard DMPP is ideally suited for use with inorganic flame retardants such as  $\text{Al}(\text{OH})_3$ , since its low viscosity allows larger quantities of these halogen-free additives to be added to the matrix polymer. "Levagard DMPP has recently become increasingly important as an excellent alternative to dimethyl methylphosphonate. According to current EU regulations, this chemical must be labeled as 'toxic'," explains Dr. Heiko Tebbe, head of Business Development Phosphorus Chemicals in LANXESS' Functional Chemicals business unit. "We have a good solution for customers who, due to legislative pressure, need an alternative to this liquid flame retardant – Levagard DMPP."

Disflamoll DPK is a plasticizing flame retardant with outstanding fire safety characteristics for a range of polymers such as PVC, for rigid and soft polyurethane foam materials, thermoplastic polyurethanes, NBR, phenolic resins and the LANXESS elastomer Levapren. Disflamoll DPK is based on the active ingredient diphenyl cresyl phosphate and stands out over many competitor products that offer additives with a similar chemistry, as it does not need to be labeled as "toxic". "There is no requirement for 'toxic' labeling whatsoever. We go to great lengths to keep the content of problematic o-cresol in

Disflamoll DPK as low as possible,” states Tebbe. “For example, we use only synthetic cresol and work in strict adherence to all relevant limit values.”

Other LANXESS flame retardants gaining in importance as ever stricter requirements are placed on everyday products include Levagard TEP and Disflamoll DPO. Levagard TEP is a halogen-free, low-viscosity additive with an excellent flame-retardant action and very high phosphorus content. It is used in materials such as rigid PIR/polyurethane foams and thermosetting plastics and is achieving above-average growth. Disflamoll DPO is found in PVC floor coverings and helps to reduce smoke gas density in fire scenarios, thereby keeping escape routes visible for longer. This additive is also becoming ever more widely used in particularly sensitive areas.

The Functional Chemicals business unit is part of LANXESS' Performance Chemicals segment, which posted sales of EUR 1,530 million in fiscal 2009.

LANXESS is a leading specialty chemicals company with sales of EUR 5.06 billion in 2009 and currently around 14,300 employees in 23 countries. The company is represented at 42 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals.

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

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### **Information for editors:**

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## News Release



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

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