

BASF and Polymeric FR



Styropor® and Neopor® from BASF now globally only available with polymeric flame retardant

June 15, 2016

- **Transition complete in Europe, Asia and North America**
- **Fire protection with improved environmental performance**
- **Supporting growth in energy-efficient construction**

BASF is the first manufacturer to offer its product portfolio of expandable polystyrene (EPS) raw materials for thermal insulation worldwide exclusively with the new flame retardant Polymeric FR. Both the white Styropor® brands as well as the even more efficient graphitic and therefore silver-grey Neopor® are now manufactured only with the polymeric, plastic-like flame retardant Polymeric FR. It has improved environmental properties compared with the previously used HBCD (hexabromocyclododecane).

Following the very early change in Europe at the end of 2014 and in Korea in the autumn of 2015, BASF was the first company to recently switch Styropor® and Neopor® entirely to Polymeric FR in the Chinese market for insulation materials as well. In the USA, BASF has also been offering Neopor® only with the new flame retardant since the beginning of 2015. Styrodur®, the green extruded polystyrene insulation board (XPS) from BASF, has already been exclusively equipped with Polymeric FR for almost one and a half years.

Background: Polymeric FR and HBCD ban

The use of HBCD as a flame retardant has not been permitted in the EU since August 2015 based on the REACH regulation. Moreover, since March 2016 the classification of HBCD as a POP (Persistent Organic Pollutant) substance in the environmental programme of the United Nations has been implemented in the EU. The safe flame retardant Polymeric FR is now used instead, preceded by a testing and development phase of several years which was supported by BASF. So far, the toxicology and environmental effects of other, non-polymeric alternatives to HBCD have not been investigated sufficiently.

Availability ensured

“The flame retardant Polymeric FR is available in sufficient quantities, which is why there was no need to make use of an exceptional provision”, explains Giorgio Greening, Head of BASF’s Global Business Unit Styrenic Foams. A consortium of a number of European EPS manufacturers was successful in its application for an exceptional provision and may still use HBCD, which has since been banned, for a limited period of time and in a limited number of applications. Due to the POP classification, however, products containing HBCD must be labelled as such. Various companies, such as the members of the IVH (Industrial Association for Rigid Foam) in Germany, already switched their products to EPS with Polymeric FR end of 2014.

Required for growth in energy-efficient construction

By offering polystyrene foams that contain Polymeric FR, BASF continues to ensure the availability of eco-efficient thermal insulation solutions for sustainable construction. Changing over to the new flame retardant was therefore accomplished in close dialogue with customers. Styropor® and Neopor® from BASF provide the insulation industry with a raw material that combines high insulation quality, safety, ease of processing, and low weight with a favourable cost/performance ratio. As a result, the company is making an important contribution to global climate protection goals.

Recycling of used boards

While handling of the flame retardant HBCD is prohibited, insulation materials containing HBCD are safe for humans and the environment - when being used as well as during demolition and energy recovery processes: the flame retardant is sufficiently well embedded into the polymer matrix. Insulation boards with HBCD made from expanded polystyrene that accumulate during demolition of a building may therefore still be thermally recycled in waste incineration plants in accordance with the EU POP regulation. In Germany, a permit must be obtained for this purpose, which approximately 10 of 80 domestic waste incineration plants had already received by March 2016. During recycling in a waste-to-energy incineration plant, almost the entire energy content of the boards is recovered as heating energy.

Contact:

neopor@basf.com

Additional information about Neopor® and Styropor®:

www.neopor.de or

www.styropor.com