MCA TECHNOLOGIES GmbH
(Switzerland)

MCA® PPM Triazine HF

History and background:

Flame retardants are used in polymers and coatings to prevent fires and thus have a direct and obvious benefit. However, concerns are being raised about extensively used brominated flame retardants (BFRs) because of the persistence, bioaccumulation, and potential for toxicity, both in animals and in humans. Of particular concern is the formation of toxic gases containing dioxins and halogenated diphenyls in case of a fire accident, and their ultimate disposal by incineration.

The European Union (EU) has led the way in phasing-out the use of PBDEs (polybrominated diphenyl ethers). In February 2003, the EU announced that two commercial mixtures of PBDEs, PeBDE (Penta bromodiphenyl Ether) and OBDE(Octa bromodiphenyl Ether), would be banned as of August 2004. As of July 1, 2006, the EU also banned DBDE (Deca bromodiphenyl Ether) for use in electronic products, including TVs and computers; the EU is considering a full ban of DBDE by 2008.

In the US, several states have also taken action on PBDEs. In California and Hawaii, PeBDE and OBDE should have been phased out by 2008, and in Maine PeBDE and OBDE were to be phased-out in 2006, followed by a DBDE phase-out by 2008. Restrictions on PBDEs have also been proposed in Massachusetts, Michigan, New York and Washington.

At the federal level, the US Environmental Protection Agency issued a regulation that came into force January 1, 2005, prohibiting the manufacture or importation of PeBDE and OBDE without an evaluation. This rule provides the US government an opportunity to evaluate any intended new use and, if necessary, to prohibit or limit that use before it occurs.

Due to this regulatory and environmental pressure, a number of original equipment manufacturers (OEMs) have developed phase out plans for BFRs, some (Apple, Sony Ericsson, Dell, Nokia etc.) have even made strong commitments with deadlines.

Combination of the proprietary[1] MCA® PPM Triazine HF with ammonium polyphosphate (APP) is particularly intended to be a high-efficacy halogen-free alternative to the brominated flame retardants (BFRs), offering even other advantages (less smoke density, better stability of the polymer itself, no potential of the formation of halogenated dioxins and di-/bi-phenyls, etc.).

Against inorganic flame retardants, also used extensively in the industry, much less loadings are required to enable the production of light-weight materials for the sake of energy saving, particularly in the transportation industry, and the ease of processing.

Ref. 1 : European Patent Application Nr. EP 09075082.9-2115/2130854; US and other Patents also applied for

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