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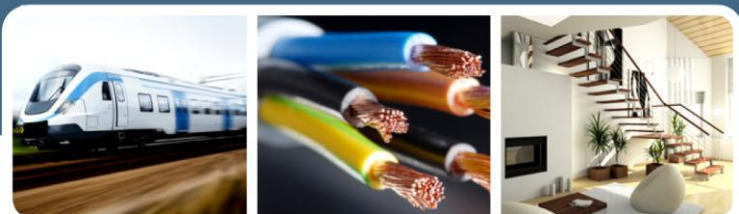
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f Who is pinfa and what is this newsletter?

A new sector group for non-halogenated phosphorus, inorganic and nitrogen flame retardants (PIN FRs) was established at Cefic, the European Chemical Industry Council, in March 2009. The mission of pinfa is to provide information on non-halogenated phosphorus, inorganic and nitrogen flame retardants. The members of pinfa share the common vision of continuously improving the environmental and health profile of their flame retardant products and offering innovative solutions for sustainable fire safety.

By concentrating on non-halogenated phosphorous, inorganic and nitrogen flame retardant technologies, pinfa aims at developing a more detailed and informative





discussion with industry, users, regulators, NGOs and public opinion. pinfa members seek to dialogue with stakeholders along the supply chain in order to learn about regulatory and market requirements. This newsletter is part of this dialogue and aims at informing all interested stakeholders about developments in flame retardants and their contribution to fire safety.

The newsletter is available to the public (free electronic subscription) on our website www.pinfa.eu and we welcome any feedback that our readers may have – please contact me or our communications' officer, Sylvie Famelart (sfa@cefic.be), for any comments.

Michael Klimes, President of pinfa, (mklimes@nabaltec.de)

f Members of pinfa

The founding members of pinfa are Budenheim, Ciba (now part of BASF), Clariant, Italmatch, Lanxess and Nabaltec. Since January 2010, the association has 2 new full members, Krems Chemie and Thor; and 4 new associate members, Delamin Ltd., DSM Plastics Engineering, Rhodia and William Blythe. pinfa also agreed mutual membership with iNEMI (the International Electronics Manufacturing Initiative – www.inemi.org). Welcome all to pinfa!

To receive information on how to become member of pinfa, please contact Brigitte Dero, Sector Group Manager of pinfa, at bde@cefic.be

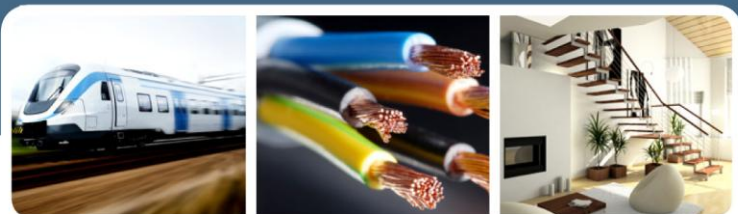
f New pinfa website

On 8th March 2010, pinfa has launched its new website dedicated to the non-halogenated phosphorus, inorganic and nitrogen flame retardants targeting a multiple audience of downstream users, regulators, policy makers, media or the general public. This new website presents key information on PIN FRs function, applications and products (fact sheets & a product selector), on health and environment, a library (brochures) and a media section (news, press releases, newsletters, resources). Visit the website at www.pinfa.eu.

We welcome any feedback: please contact Sylvie Famelart at sfa@cefic.be

f pinfa called before European Parliament to present information on PIN FRs

On 23rd March 2010, pinfa was called by a group of leading Members of the European Parliament to present information on non-halogenated phosphorus, inorganic and nitrogen flame retardants (PIN FRs). The group of MEPs were the rapporteurs on a proposed revision to the RoHS Directive (**R**estriction of the use of certain **H**azardous **S**ubstances in electrical and electronic equipment). The leading rapporteur has proposed a restriction on brominated flame retardants (BFRs). In this context, many MEPs have been informed that there are no safe alternatives to BFRs,



and have become concerned. pinfa outlined the applications in which PIN FRs are used within the E&E sector, their availability, ability to meet fire safety standards, environmental and health assessments, and cost considerations. A key point was the presentation of a map of FR productions sites in Europe and a chart showing the current FR market split as a pyramid, where the MEPs realised that far from there being one type of FRs only, the current market is a market of two technologies.

For more information, please contact Brigitte Dero, Sector Group Manager of pinfa, at bde@cefic.be or go to <http://www.pinfa.eu/media/news>.

f ChemSec message to EU Parliament

At the International Chemical Secretariat (ChemSec) Conference, November 2009, organised in the context of the revision of the RoHS Directive (**R**estriction of the use of certain **H**azardous **S**ubstances in electrical and electronic equipment), major electronics companies, plastics manufacturers and experts sent a clear message to EU decision makers: "moving away from Brominated Flame Retardants [...] is possible, feasible and is already happening".

Jill Evans, Member of the European Parliament, hosting, stated "The question is not whether electrical and electronic equipment industry can phase out these chemicals, but when". The brominated flame retardant industry stated that "some brominated and chlorinated products present issues for human health and the environment, others do not" and questioned whether EU Directives "should be about reflecting the marketing strategies of electronics companies".

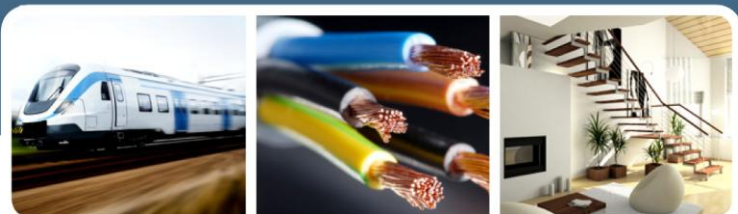
Conference summary, statements and presentations by Sony Ericsson, Apple, DSM, EBFRIIP and others are available online.

ChemSec Conference "Greening consumer electronics – from hazardous material to sustainable solutions", European Parliament, 18th November 2009 <http://www.chemsec.org/rohs/conference>

f US Deca-BDE phase out launched

The US Environment Protection Agency (EPA) has announced a phase out of the brominated flame retardant Decabromodiphenyl Ether (Deca-BDE) by the three major producers. The three companies, Albemarle, Chemtura and ICL-IP, have committed to stop production, use or import in the USA, for most applications by end 2012 and for all uses by end 2013. The objective is now to encourage other smaller producers and importers to also sign up to the phase out.

EPA has stated that "Studies have shown that deca-BDE persists in the environment, potentially causes cancer and may impact brain function. Deca-BDE also can degrade to more toxic chemicals that are frequently found in the environment and are hazardous to wildlife. Today's announcement by these companies to phase out deca-BDE is an appropriate and responsible step to protect human health and the environment."



Ending the use of Deca-BDE is supported by the International Association of Fire Fighters (IAFF).

US Environmental Protection Agency: <http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/deccadbe.html>

Chemtura:

<http://www.chemtura.com/bu/v/index.jsp?vgnextoid=25816aaabad95210VgnVCM100000f0d7010aRCRD&vgnnextchannel=f2a09871063e2110VgnVCM10000053d7010aRCRD&vgnnextfmt=default>

Albemarle: <http://www.albemarle.com/?news=text&releaseID=1367378>

ICL-IP: <http://www.ibtimes.com/mining/prarticles/20091218/icl.htm>

IAFF: http://www.mnceh.org/Fact%20Sheets%20-%20MNCEH/IAFF_deca_POSITION.pdf

f EU assessment of FRs underway

The European Commission (DG SANCO – consumer safety) has launched a study of flame retardants used in consumer products, being carried out by Arcadis and EBRC. The objectives are to inventory which flame retardants are used, where, and assess the benefits (fire safety) and the risks (toxicology, exposure risk assessment). pinfa has provided detailed input concerning the range of PIN flame retardants, their applications, and safety in use data. *EU Tender 2009/S 75-107919*

f ECHA consults on further Substances of Very High Concern

The European Chemical Agency (ECHA) has opened consultation on designation of further candidates for declaration as "Substances of Very High Concern" (SVHC). Under REACH, such substances will be subject to specific "Authorisation" procedures, and manufacturers and importers of goods will have to inform consumers whenever articles contain them at >0.1% by weight. The ECHA SVHC candidate list currently includes HBCD, SCCPs and TCEP. The consultation proposes to add Boric acid to this list.

ECHA SVHC candidate list:

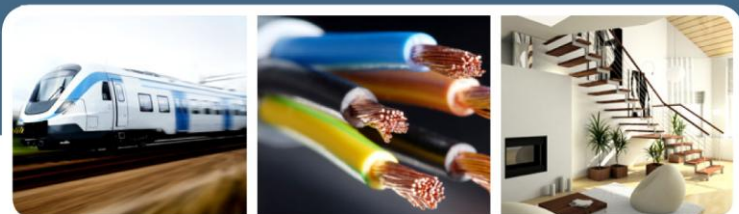
http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

Consultation on additional substances:

http://echa.europa.eu/doc/press/pr_10_03_svhc_consultation_20100308.pdf

f Easy ignitable materials kill again

Another nightclub tragedy has shown the dangers of non fire safety treated plastics. 109 people died at the "Lame Horse" nightclub in Perm, Russia, on 5th December 2009 when fire works used on stage set fire to a suspended plastic ceiling. According to reports, both the fireworks and the non fire safety treated ceiling (made of suspended plastic sheeting and twigs) were contrary to fire regulations.



The scenario is essentially the same as that in previous nightclub fire catastrophes (The Station, Rhode Island USA, 2003, 100 deaths and República Cromañón, Buenos Aires, 2004, 194 deaths) where similarly fire works set fire to non flame retarded wall or ceiling foams or plastics.

Perm nightclub fire, BBC News: <http://news.bbc.co.uk/2/hi/8396587.stm>

f Green building and fire safety

US National Fire Protection Association (NFPA) has devoted a magazine feature to the potential issues between green building and fire safety. Questions include fire safety of photovoltaic panels, structural safety in fires of green roofs or recycled building materials (e.g. beams made of glued waste timber). Environmentally safe flame retardants are not however considered.

"NFPA Journal, November – December 2009: <http://www.nfpa.org/categoryList.asp?categoryID=1917>

f Phosphorus FR for cotton fleece

A flame retardant made of phosphorus combined with a simple organic compound has been shown able to reduce the flammability of cotton fleece textiles and garments, to achieve US federal sleepwear fire safety requirements, whilst achieving durability with multiple laundry washes, and without significantly modifying fabric strength or whiteness.

"Flame retardant finishing of cotton fleece fabric: Part V. Phosphorus-containing maleic acid oligomers", X. Cheng and C. Yang, Dept. of Textiles, Merchandising and Interiors, The Univ. of Georgia, Athens, GA, USA. In *Fire and Materials*, Dec. 2009, Vol. 33, No. 8, pp. 365-37: <http://www3.interscience.wiley.com/journal/3189/home>

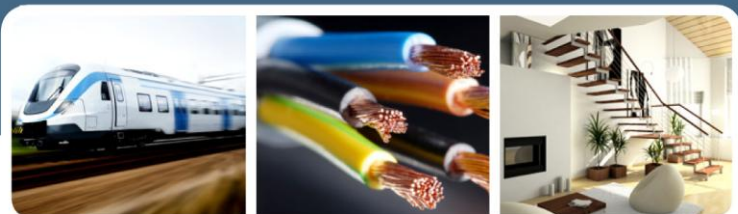
f US EPEAT – IEEE Ecolabels discussing halogenated FRs

The US programme on environmentally compatible electronics (EPEAT – IEEE 1680) is currently revising its criteria for imaging equipment (printers etc.). Other equipment groups like PCs and TVs will follow later this year. The issue of excluding brominated and chlorinated flame retardants, or requiring "low halogen", is being largely discussed, with different stakeholders taking very different positions. Two working groups are working on this question, with the mandate to make joint proposals by mid-2010. Central issues include how to define "Intentionally added" and "Low Halogen": 900 ppm halogen content is considered to pose an obstacle to recycled materials. Interested stakeholders, in particular electronic manufacturers, are invited to contribute to the discussions.

Electronic Product Environmental Assessment Tool (EPEAT): <http://www.epeat.net>

17-18 November 2009 minutes: http://grouper.ieee.org/groups/1680/1680.2/Meeting_Minutes/IEEE%201680.2%20-1680.3%20APPROVED%20F2F%20Mtg%20Wash%20DC%20Nov%2017-18%202009%20Final.doc

IEEE P1680.2 Standard for Environmental Assessment of Imaging Equipment:
<http://grouper.ieee.org/groups/1680/1680.2/>



f FRs and textiles – first FRETWORK Forum

The "Flame Retardant Textiles Network" (FRETWORK) organised its first conference in Brighouse, Yorkshire, UK, on 24th February 2010. The day centred on regulatory and environmental issues related to chemicals and flame retardants in textiles, including implications of the EU REACH regulation. Speakers from industry confirmed the pressure on brominated flame retardants, resulting in phase-outs of some of the main brominated FRs by some lead companies (HBCD, Deca-BDE) in response to market demand.

*FRETWORK (The Flame Retardant Textiles Network)
87 Redwing Road, Waterlooville, Hampshire, PO8 0LX, England.*

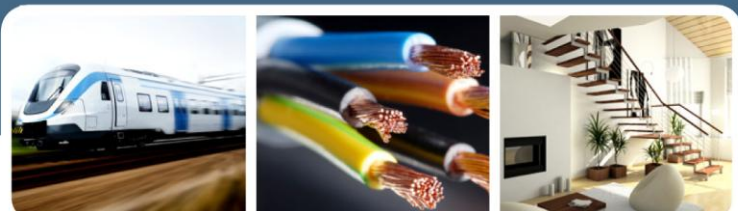
f Food safety agency calls for data on BFRs in foodstuffs

EFSA, the European Food Safety Agency, has published a call for data concerning the presence of brominated flame retardants (BFRs) in human foods, covering PBDEs, PBBs, HBCD, TBBPA and other "emerging" BFRs. In 2006, EFSA already recommended that a number of brominated FRs be included in monitoring programmes of human food and animal feeds, "the occurrence of the chemical compounds in food and feed, their persistence in the environment and their toxicity ... the currently available occurrence data on brominated flame retardants in feed and food do not allow a comprehensive assessment of contamination in all feeds and foods."

EFSA call for data on BFRs in food, 20th December 2010: <http://www.efsa.europa.eu/en/data/call/datex091215.htm>

Abbreviations

- *Brominated Flame Retardants (BFRs): HBCD: Hexabromocyclododecane TBBPA: Tetrabromobisphenol, PBB: Polybrominated biphenyls, PBDE: Polybromo diphenyl ethers, Deca-BDE: Decabromodiphenyl ether.*
- *Chlorinated Flame Retardants: SCPP: Short-chain chlorinated paraffins; TCEP: Tris(2-chloroethyl)phosphate*
- *Other: ATO: Antimony trioxide*



f Agenda

27-28 April 2010	Orlando, USA	Polymers in Cables, http://www.amiplastics.com
7-10 June 2010	Las Vegas, USA	NFPA World Safety Conference and Exhibition www.nfpa.org
8-9 June 2010	Leipzig, Germany	Interschutz Symposium "Development in fire risk analysis and fire prevention" http://www.interschutz.de/60448
16 June 2010	Leuven, Belgium	iNEMI Roadmap Workshop http://www.inemi.org
16-18 June 2010	Lund, Sweden	8 th International Conference on Performance-Based Codes and Fire Safety Design Methods http://www.sfpe.org/Education/8thInternationalConferenceonPerformanceBasedCodesandFireSafetyDesignMethods.aspx
24 June 2010	Brussels, Belgium	pinfa Workshop on "Alternatives flame retardants in E&E" www.pinfa.eu
5-7 July 2010	Nottingham, UK	INTERFLAM 2010 and Flame Retardants 2010 http://www.intersciencecomms.co.uk/html/events/if10a.htm pinfa present as sponsor & exhibitor
23-24 Sept. 2010	Zürich, Switzerland	3 rd WEEE Forum Conference http://www.weee-forum.org
29-30 Sept. 2010	Gothenburg, Sweden	Fires in Vehicles http://www.sp.se
27 Oct-3 Nov. 2010	Dusseldorf, Germany	K 2010, International Trade Fair for Plastics and Rubber www.k-online.de pinfa present as co-exhibitor (Hall 8a/H32)
4-5 Nov. 2010	Cannes, France	Textiles Coating and Laminating 2010 www.intnews.com/TCL2010
8-11 Nov. 2010	Vienna, Austria	Going Green Care Innovation – Electronics and the Environment http://www.care-electronics.net/CI2010/
17-18 Nov. 2010	Heathrow airport, UK	Electrical and Electronic Equipment and the Environment Conference 2010 http://shop.era.co.uk/products.asp?recnumber=1371