

The Center for Electronics Design & Manufacturing (cEDM) mission: *To support industry by means of **knowledge creation and sharing**, **scientifically sound methodologies** and **collaboration throughout the electronic supply chain**, in the development and production of high quality, reliable electronic modules (PBA).*

The Center for Electronics Design & Manufacturing organizes workshops on a regular basis. During these workshops Printed Board Assembly topics are presented followed by a Q&A session. The participation of our cEDM partners allows us to enlighten the topic of the day from different viewpoints in the electronic supply chain.

This workshop is of interest to all involved in or responsible for the design, production, quality, test, supply and system integration of electronics in products for which reliability is an essential property. The workshop will take place on the 30th of September 2016 at imec, Kapeldreef 75, Heverlee, Belgium.

10 years of RoHS



10 years ago, July 1st, 2006 to be exact, the EU directive 2002/95/EC RoHS (Restriction of Hazardous Substances in electrical and electronic equipment) came into effect. The goal of this directive is to reduce the use of six hazardous materials in the electronics industry : Pb, Hg, Cd, Cr⁶⁺ and the flame retardants PBB and PBDE.

The electronics industry started preparing for this directive well in advance. It proved to have an impact to the operations of the electronic industry as well as on electronics quality and reliability, larger than what some expected.

Mainly the use of lead-free soldering processes, and the subsequent higher soldering temperature, induced a change in the choice of solder alloys and flux formulations, PCB substrate material, board and terminal finishes, component mold compounds and lead to more thermal stress to the components during soldering. It also changed the way we look at reliability of electronic modules. Even some of the well-established design rules required revision.

On the other hand, the requirement of traceability of RoHS compliancy over the total supply chain was a logistical challenge, both for the component suppliers, for the manufacturers ERP systems and for the quality departments in the companies. As an extra complexity, the exemptions for some sectors meant that most manufacturing companies had the need to run both lead-free and SnPb solder processes simultaneously (some still do).

cEDM organizes 2 workshops around the theme of the impact of RoHS :

During the next workshop EDM 26 (March 2017) we will focus on the impact that the RoHS directive has on the design of electronic products, on the electronic manufacturing processes and on the reliability and lifetime of the modules.

During this first workshop, we will focus on legislation and on the material aspects of the RoHS story. Below you find a short overview of the presentations that will be given during the workshop.

- **The future of RoHS, what is still coming up?**

In the last ten years, we got used to RoHS. Even the recast of 2011 did not fundamentally change the way RoHS works. But will this also be true for the next ten years? And what about other EU policies coming up? Let us take a look at the EU negotiation table.

Johan Daniëls : Attaché FOD Leefmilieu, Afdeling Productbeleid.

- **Soldering Materials and chemistry : evolution in the past 10 years of RoHS and future challenges and trends.**

Steven Teliszewski : Interflux electronics

- **Conductive adhesives as alternative for solder, or is there more ?**

Jochen Schuermans : Roartis

- **Lead-Free soldering : a challenge for PCB base materials**

Adolf Sommer : Manager of Application Engineering : ISOLA group

The coffee is ready at 13:30, the presentations start at 14:00. At 17:00, we invite you to network, facilitated with a drink and a snack.

Practical information

cEDM workshop participation:

- Participation fee: **€150**
- Participation is free of charge for cEDM members & cEDM partners.
- Location: imec, Kapeldreef 75, 3001 Heverlee
- Registration via e-mail: academy@imec.be
- Imec is a licensed service provider for training according to “kmo-portefeuille” : license number DV.O108298.



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Interested in member- or partnership of cEDM, or need for more information : please contact: Bart Cox, bart.cox@imec.be, +32 16 283108

More cEDM info: www.cedm.be