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**An:** hse-rohs@oeko.info

**Betreff:** Including more substances in the RoHS

Dear Mr Gensch,

I represent the Swedish Electronics manufacturer's association and received your letter thru an IPC email just before Easter.

First of all the electronics industry has very few in-house chemist as this has not been an issue. Therefore it's difficult to give you any feedback on substances content on different components. In a project, within this association, we developed 2003 an generic PSR (Product Specific Requirements) for electronics to make an EPD (Environmental Product Declaration) published on the [www.environdec.com](http://www.environdec.com). The base material data we could get by IVF which now is Swerea/IVF <http://www.swereaivf.se/default.aspx> but the materials were sorted in similar manner as in your documents (Semiconductors, capacitors etc.) and those were regarded to have similar substance content in each group. This institute might have information of such substances.

Regarding adding new substances in the RoHS, we have to balance this with the WEEE and recycling procedures. At the moment the consciousness among consumers is high to put EEE in the correct bin, then it's the recycle process that should be in focus as very little EEE is put in the wrong bin or in the Nature today.

The introduction of RoHS was very costly for the industry. We can be lucky that the conjuncture around the adoption time of the directive was good in the EU for the electronic industry so it could absorb the cost. It has been an enormous logistic nightmare to handle this and still today most electronic producing companies have three to four soldering processes up and running (SMD and wave soldering leaded/unleaded, using a lot of more energy than before RoHS).

If you proceed with this idea, very deep thinking has to be done in respect of the mixture between RoHS and REACH. Most electronics companies seem to fall into the REACH down stream definition (also by pressure from upstream customers). In exception of few European countries the majority of Electronics companies are less than 50 persons. The large OEM "manufacturers" do not produce very much anymore, they subcontract. For the EU electronics manufacturing companies to compete in the Global environment they have to be extremely slimline and dependent on automation and flexibility. Most electronics components are NOT produced within EU. Therefore to have two regulations with two different goals to handle at the same time with components the manufacturer has very little influence on, will be a huge frustrating administrative burden – again but much more. The electronic industry has also to comply to EuP directive.

From your position you might not see this because the usual "stakeholders" are from large companies or organisations using experts that today are far away from the real production and component sourcing reality. Most of them only have to put on a specification sheet what has to be done-reported-avoided etc. The subcontractor will do the job, which very very often is a company <50 persons with very limited recourses. So any "expansion" of RoHS much follows with a lot of "expansion" of support to those companies. Basically the actual RoHS directive dumped the shit into the industry and told - you fix it! Still today they are very few open reliability reports on lead free wave soldering. (Was it the reason why the "Motor faulty lamp" lid this morning? Driving from Garage +18°C to first 0°C then slowly to -7°C as I run north...?).

In summary: The RoHS directive cost was about 5% of turn over per year during 2 years if you were a serious OEM company with own component/product production. The expanded RoHS will not be lower cost.

Best regards  
Eric Östlund

For Swedish Association of Electronics Manufacturers  
<http://www.elektronikindustriforeningen.se/index.php?lang=en>

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