



Within REACH

REACH – the Registration, Evaluation and Authorisation of Chemicals Regulation – is aimed at protecting human health and the environment, as well as improving industry competitiveness and innovation.

The regulation stipulates all chemicals and preparations – substances of very high concern (SVHC) – currently manufactured or imported into Europe in quantities of more than 1tonne per annum will need to be registered. The Regulation also requires information to be provided about the substance's properties and uses, along with an assessment of the associated environmental and health risks.

SVHCs will require prior authorisation for specified uses. All applications for an authorisation must include an analysis of alternatives and a substitution plan where a suitable alternative exists. However, there may also be opportunities to become more resource efficient through material substitution or 'green' chemistry.

The first major business milestone was 1 June 2008, which saw the opening of a six month window during which chemical manufacturers can pre register products. Miss it, and they will have to go through a more stringent registration process immediately.

With the electronics industry still untangling itself from the red tape of the RoHS Directive, it's important to understand exactly what's within REACH, and whether it will have the intended effect on the electronics industry.

"The main aim of REACH is to protect human health and the environment from the risks of chemicals," explained REACHReady's commercial director Tim Jessel. "This will be achieved through a registration

Don't panic! The latest EU Regulation is designed to protect our health.

By Mike Richardson.

process providing more information about substances and how they can be used safely." Another element in REACH is an authorisation process that seeks to push hazardous substances off the market. "There will be ways these substances can still be used," Jessel continued, "but ... under strictly controlled conditions."

It's here that the opportunity for innovation lies, as any substance subject to authorisation is a strong candidate for substitution with safer alternatives. "These alternatives might already exist," Jessel explained, "but

current economics makes them uncompetitive or, more likely, research and development would need to be carried out to identify new alternatives."

According to Dr Chris Robertson, ERA Technology's head of reliability and failure analysis, the impact on industry could be positive, negative or, more likely, a mixture of both!

"On the positive side, it will benefit companies who are already well ahead or willing to innovate – for example, by phasing out suspect substances from their products ahead of legislation," he stated. "Since REACH is likely to lead to similar requirements in other global jurisdictions, this places such companies in a favourable market position.

"REACH will also mean that, over time, fewer hazardous substances will be manufactured, making compliance with requirements easier. It will





also mean better information will be available to downstream users of substances, thus promoting safer use.

“On the negative side, REACH impacts on chemical manufacturers and suppliers. The impact on so called downstream users who buy a substance from an EU supplier and those who import ‘articles’ – components, subassemblies and finished products – whilst significant, is much less. Hence, one



suggests nearer 7% on average.

“Furthermore, countries shipping substances into the EU must nominate a representative or importer and face the costs of REACH. For example, China exports SVHCs to the EU and may face the authorisation costs, so is unlikely to be as competitive from a pricing point of view.”

Jessel agrees that REACH will have a significant impact, particularly for the unprepared. “Substances previously relied upon might no longer be available through regulatory or economic reasons,” he advised. “If you import substances, you may have costly duties under the regulation. Preparation is the way to mitigate these risks and you should inventory all the substances you buy and supply to confirm your obligations as soon as possible.”

Martin Tarr, chairman of SMART Group, Scotland, (pictured below) feels Europe’s

material formulations – at least in the short term – and someone will have to pick up significant implementation costs.”

A recipe for guidance?

Tarr says that whilst the requirements of REACH are well known within the chemical industry, electronics manufacturers are only just becoming aware of them.

“Most activity is taking place in the materials supply chain for semiconductor manufacture, board fabrication, solder assembly and cleaning – mostly within larger companies and industry organisations,” he observed.

“Manufacturing professionals are becoming more aware, but designers generally don’t realise the potential impact of the legislation. REACH is one of the most complex pieces of legislation ever to have come out of Brussels and implementing it is an evolving process. Regrettably, there’s no simple ‘cookbook’ giving practical guidance to our industry, even though there are common problem areas.”

RS Components’ group product compliance manager Alan Lund sums up the effect of REACH in two words: don’t panic! “Remember, it will be the substances with the most potential impact that will be addressed first,” he confirmed.

“Having already gone through RoHS, the electronics industry has addressed the most severe concerns of certain substances. Everyone has to recognise there might be fundamental changes in formulation of certain chemical preparations containing SVHCs in order to make them safer.

“Post REACH, the concern is whether customers will still be able to buy certain preparations for manufacturing applications – but it’s too early to tell because it’s down to the amount of risk. They may contain a harmful chemical, but the exposure scenario around that chemical might be limited. REACH is designed to give people the information of what is – and what isn’t – safe. The principles are fairly simple, but the technicalities around it, and what has to be achieved, are very complex.” ■

“[REACH] will benefit companies who are already well ahead or willing to innovate.”

Dr Chris Robertson, ERA Technology

impact may be promoting the movement of chemical production out of the EU. For everyone however, there will be increased costs, such as in product redesign.”

Another potential negative may be the threat of component obsolescence, resulting in a rise of counterfeit components flooding the market. With the authorisation of SVHCs costing suppliers approximately €50k, Farnell’s Gary Nevison says cost will undoubtedly be a factor as designers look for alternatives.

“The EC believes 2% of all substances will become obsolete as manufacturers conclude the cost of REACH registration and authorisation is prohibitive,” he explained. “Even 2% obsolescence of substances could mean the obsolescence of hundreds of products. Whilst the EC feels increases will be capped at 0.5%, DEFRA has carried out research that

electronics industry has already become responsible in the way that it manages risk, so the positive impact on the intended beneficiaries of REACH will be minimal.

“REACH might improve the awareness of potential hazards, but will do nothing to make the industry more competitive,” he cautioned. “Worse, the uncertainties relating to chemical availability are likely to inhibit change in

