Keeping the faith

As the RoHS deadline looms, how is compliance successfully achieved? By **Vanessa Knivett**.

With the Restriction of Hazardous Substances (RoHS) Directive due to be enforced on 1 July 2006, there is a flurry of compliance activity. Whilst some companies are well ahead with preparations, others are still at the investigative stage. And with clarification on some important exemptions only recently received, it is hardly surprising that many companies aren't as far ahead as they would like.

Consider the problems faced by distributors; not only do they have to assess the compliance of thousands of products, they also need to maintain stock of compliant and non compliant parts – the latter for exempt products and for repairs.

Preparation for the introduction of new legislation like RoHS on this scale isn't achieved overnight. One of the largest hurdles for RS Components was RoHS' seemingly variable timeline. Graham Johnson, UK marketing manager, says: "It appeared somewhat of a moving feast and there was the risk that RoHS would be 'rolled', along with WEEE legislation."

In the early days, there was much confusion. Recounts Johnson: "RoHS is about finished goods, so as a component distributor, we thought it wouldn't impact components. However, it quickly became apparent that you need compliant components to build compliant equipment, so the number of products under investigation snowballed. Currently, there are about 250,000 components that we have outstanding or completed RoHS actions on."

Fundamental aspects of the legislation were hotly debated – such as the infamous point about maximum concentration values. Recounts Johnson: "Our conclusions eventually concurred with the original Directive, but understanding has changed significantly in the supplier base over time."

RS began highlighting RoHS some three years ago and has since dedicated much time and effort into investigating the compliance of its supply chain, gathering the necessary documentation and putting in place a customer education programme. It has recently been rewarded with a BSI RoHS Trusted Kitemark.

RS' compliance project manager Mick Parker started with a risk assessment, highlighting products more likely to be subject to RoHS than others. However, as quickly as he excluded products, customers would question their status. Hence, castors, fasteners and fixings were eventually added into the survey.

A simple questionnaire was distributed when individual suppliers were ready to provide information and results collated and reviewed for each product. RS' RoHS team assigned different information statuses to each part – for example, 'already

Greatest conversion ever?

"RoHS is something that nobody in the typical electronics supply chain can avoid," states Graeme Cathrall, EBV's general sales manager for UK and Ireland.

However, he notes that, for a subject that affects such a large proportion of the supply chain, there has been surprisingly little coordination.

Avnet, EBV's parent, commissioned a survey to establish how suppliers were responding to RoHS. It found a split between manufacturers on their choice of identification method for RoHS compliant parts. It also found that, whilst almost 80% of the component manufacturers provided information on lead free conversion/RoHS on their websites, there was no standard format for provision.

Where distributors can play a part is in sounding out component information and helping customers define a suitable conversion date. "As a distributor, you cannot escape the fact that at this time of RoHS conversion, a 100% match between manufacturer plans and customer requirements will hardly be possible. However, it is possible to adapt your logistical, IT and information capabilities so the customer gets as much help as possible," says Cathrall.

EBV has a three step approach:

- Clear identification of products in the IT system and in the warehouse
- Clear and uniform communication with customers throughout the business units
- Greatest possible support of customers in their quest to obtain information

RoHS compliant products are already clearly identified in EBV's backbone systems and components at Avnet's warehouse in Poing, Germany, are separated visually, currently using a 'lead free' sticker. Meanwhile, sales teams are consulting with customers to ensure they 'factor out' RoHS compliant component supply problems, whilst supply chain experts are identifying stock control risks for customers. And EBV's field application specialists are finding solutions for discontinued products and necessary redesign caused by RoHS.

Concludes Cathrall: "European electronics is in, without doubt, the greatest conversion phase of its history."

compliant', 'won't be compliant' and 'compliant with new part number'. As Johnson relates, categorising compliance was more complex than many imagined because an RoHS compliant part is not necessarily suitable for lead free solder processes.

When final status was ascertained, information was published on the RS website. Said Johnson: "We needed to be clear on what we were declaring from the beginning and it's fair to say there are lots of products still in a transitional process. Customers can request information on individual parts and use the 'Notify Me' tool on the website to track when changes are made to an individual product's status."

BSI followed RS' audit trail from the start of the survey process through to declaration of product lines. Assessment was based on IEC QC 080000 and BSI's Material Control Plan, requiring a combination of risk assessment, materials analysis and quality control from the applicant, to ensure RoHS compliance.

Parker said that, whilst it would be impossible for any distributor to trace components to source, they can't take all declarations as fact either. Hence, RS performed compliance testing on high risk components using in house ED-XRF equipment. And Parker recommends that customers adopt a 'blend of risk assessment, testing and good quality management' to satisfy clients or an enforcement agency.

Where a company carries responsibility as first importer, screening is particularly necessary for legal reasons. Concern has been voiced about components manufactured in Asia using sub components and materials sourced through local supply chains, which are harder to track. But Johnson noted: "We were pleasantly surprised by the response of Far Eastern suppliers. Often, they could provide us with independent third party test reports for components. Having embraced their own environmental legislation, this has put them in a good position to meet European legislation."

Distributors may struggle to assess the sheer volume of products implicated by RoHS, but they have an advantage compared to the average customer – scale. Scale has allowed distributors to put pressure on component suppliers to clarify the situation on supplied products. Noted RFI's Vic Clements recently: "The main component distributors seem to have realised the crucial position they occupy and have made significant efforts to bring their ranges into compliance."

Certainly, RS Components isn't the only distributor to have gone that 'extra mile' to investigate compliance across its range. However, there is still work to be done. Says Johnson: "Two years ago, I said a lack of component data threatens RoHS plans. To be honest, for those in manufacturing, that is still the case; there is still an awful lot of data to be gathered and published."

But for distributors and customers alike, he believes that their efforts are definately worthwhile. "Fundamentally, we all support the environmental benefits of the RoHS Directive and recognise that most products will be produced with compliant components in the future."