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Sustainable Cleaning

Dosing, Dilution & Chemicals

By Jo Jacobius

For some twenty years, the Cleaning Industry has faced the issue of balancing the health and safety of both its workforce and customers with providing the required standards of performance and cost. In the new millennium another issue has increasingly hit the headlines: the health and safety of the planet. Combining all these issues leads to the 'Three Pillars of Sustainability' - Social, Environmental and Economic.

Jo Jacobius, from the UK Cleaning Products Industry Association looks at how the Industrial and Institutional Suppliers of Cleaning Chemicals have managed to square this circle.

The Industrial and Institutional sector of the £3 billion Cleaning Products Industry is worth around £700 million and is growing at around 3% per annum. The sector is dominated by two multinationals but there is also a plethora of smaller, often regional, companies or those that offer specialist expertise and products for a specific industry.

But regardless of their size there are some issues that are considered priorities in the current market. Broadly, these issues can be defined by the 'Three Pillars' and of course these are matters of concern not only to the Industry, but to many of its customers too – as sustainability has become the touchstone for many purchasing, planning and logistics decisions.

Social Issues

The Cleaning Products Industry has some challenges to manage in order to meet the needs of its customers and its customers' customers. The safe use of products that have the necessary performance to provide Food Safety and assuring the safety of premises to help with infection control are all issues that must be considered by those advising customers on what to purchase and, often, how to achieve best results.

Economic Issues

Some of the top concerns of the Industrial & Institutional (I&I) sector of the Cleaning Products Industry overall fall within the Economic category. Large increases in the price of raw materials and freight costs must be weighed against demands from customers to reduce costs whilst maintaining safety, standards of performance, and increasingly with regard to 'green' and sustainable procurement.

Environmental Issues

The Cleaning Industry faces increasing demands to provide Environmentally Safe products commensurate with increasing evidence of climate change, which is allegedly being driven by mankind's actions. Unfortunately many of the systems developed to measure Environmentally Safe Products are only based on simplified single factors rather than giving consideration to the whole life cycle of the products. (Ingredient production, product manufacture, subsequent transport, use and ultimate disposal).

The I&I sector of the Cleaning Products Industry must ensure safe and effective use of its products by often-transient workforces composed of many cleaning staff whose first language is not English. The introduction of pictograms, wall-charts and training has done much to improve staff understanding. Of course, whilst there is a Social (safety) issue here, the way in which staff use products – correct dosing, effective and efficient use of products, and correct selection of products, temperature and energy use, for instance – fall not only into the 'Environmental' category but into the Economic (Financial) considerations, too.

Happily, it is almost always the case that if you choose and use products well, cleaning staff and users of the premises will be safer; costs will be reduced; and the environment will be protected. The 'Three Pillars' form a coherent recipe for a sustainable future which in an ideal world would provide an optimal solution and be easy to achieve. However, the practical reality is far more complex. Procurers looking how best to achieve a solution would be well advised to seek the Industry's guidance on sustainable (green) product purchasing and specification.

The challenge of Sustainable ('green') procurement

"An emphasis on green procurement has provided particular challenges for the sector" Dr Andy Williams, Director General of the UK Cleaning Products Industry Association (UKCPI) says: "Green procurement was a difficulty as different organisations tended to draw up their own criteria, many of which were not scientifically sound. To those of us who are scientists working in the industry, it means 'sustainable cleaning'. This very point is highlighted in the newly-published guidance for *Sustainable Cleaning* endorsed by DEFRA following a review by the UK Chemicals Stakeholder Forum and the Advisory Committee on Hazardous Substance. The guidance states: *'It is a common misconception that an ingredient from a plant or other naturally-derived source will necessarily be superior in terms of human safety, biodegradability, aquatic toxicity and sustainability than one from a petrochemical source'*.

"We are pleased to say that a more realistic view is gaining ground. We view it positively and the UKCPI has been addressing this issue for many years in the context of continual improvement".

Purchasing organisations in the UK are increasingly focusing on 'Green Procurement' and express concern about achieving cleanliness through the use of chemicals. Regrettably there is a misconception that chemicals come only at the expense of safety – for both mankind and the planet.

This often leads to debate about 'natural' versus 'chemical' cleaning products but, according to the UK Cleaning Products Industry Association (UKCPI) this is a distraction. In fact, these objectives are not at all at odds, according to the UKCPI. One of the problems is the inaccurate view that in some way 'natural' products are superior in terms of safety to 'chemical' products. This view first grew up among 'green consumers': today, an enthusiasm for all things 'natural' is a defining consumer trend of our time.

But now this perception is uncritically being written into purchasing specifications for professional cleaning through 'green procurement' policies. "For organisations pursuing sustainable development, the view that 'natural is superior' is completely counter-productive; in some cases it can lead to decisions that – quite inadvertently - have the opposite effect of that which was intended," according to **Dr Andy Williams**.

The fact is that all substances – including the ingredients in cleaning products - are just arrangements of atoms of the same 90-odd chemical elements of which the planet is made. It is therefore meaningless in terms of safety or sustainability to differentiate between ingredients with the simplistic labels of 'natural' or, implicitly, 'unnatural'.

Good intentions may have unintended consequences

But Industry experts point out that the real challenge lies, not in what is chosen so much as how it is used. Often, green procurement criteria and the regulations that endorse the principles are well-intentioned but have unintended consequences.

For instance, concentrated products are finding their way into consumer acceptance. Similarly, concentrates are also being adopted in the I&I sector but, of necessity, for many functions these products are more powerful than the equivalent domestic ones. Examples include machine dishwashing and commercial laundering where the time and water available must be reduced. The consumable products are more concentrated and, as a consequence of hazard-based labelling criteria, are classified as more dangerous.

This potential hazard is mitigated by automatic dosing, very often, and this serves to control the risk as well as reducing manual handling, preventing overdosing and reducing waste.

Sustainability criteria, which are currently embodied in eco-labelling criteria, do not take account of these factors.

The level of impact on environmental sustainability that concentrated products and smaller pack sizes are making in the I&I sector is not well understood. Yet, to give but one example, a 2 litre pouch of hard surface cleaner concentrate can make 400 ready to use trigger spray bottles so saving not only massive amounts of packaging waste but also cutting transport miles as one delivery truck replaces 105 trucks.

“Poor performance undermines sustainability and may have the knock-on effect of raising costs and damaging business or at least denting budgets. For those engaged in professional cleaning, this is a crucial point,” says the UKCPI.

The safety of cleaning products is also not going to be assured by ‘natural’ labels but by risk assessment, now being further underpinned by the REACH Legislation. Biodegradability is not a new ‘green’ feature of cleaning products: it has been a legal requirement for the main ingredients – the surfactants - for 30 years. Safety also depends, as mentioned before on safe use by properly trained staff who follow the instructions.

Once safety is assured, green procurement is much more about getting the best out of the products by correct use and minimizing waste than it is about the choice of ingredients. Wherever raw materials are sourced, they have to be chemically processed – ‘interfered with’ by man – to make them work and ensure they are safe and sustainable.

Dr Williams concludes: “Green or sustainable procurement should not be at the expense of good sense and effective cleaning. At worst there may be a lack of efficiency or wasted money; at worst, the threat to human health can be enormous. Often the people best placed to advise on professional cleaning to achieve the well-founded principles embodied in the ‘Three Pillars of Sustainability’ are those engaged in producing the products whose research and development resources are hugely impressive. We would urge those engaged in procuring services to consult the Industry and take advantage of the wealth of expertise that is available there. This will be one of the best routes to achieving policies that tick the Social, Environmental and Economic boxes”

For further information, contact the UK Cleaning Products Industry Association on 01829 770055 or email ukcpi@ukcpi.org.

Sustainable Cleaning can be downloaded from www.ukcpi.org