Widely considered the most ambitious chemicals regulation programme, REACh is on a mission to eliminate all substances deemed harmful to humans and the environment. May 2013 was one of the stage steps set for registration; the last major date is scheduled for 2018.

REACh at the midway mark

It was, at first, considered a mission impossible (and extremely costly) for European manufacturers, not consumers, nor the environment. Meeting the May date had already cost one company €500 million. The two latter consumers, and the environment, have every reason to view the European directive as a positive development. Protecting humans, workers as well as users, from unsafe chemicals and preventing toxic pollution in nature are REACh's two foremost goals.

Garments are regularly found to contain dangerous chemicals in unauthorised quantities, as the European Union's alert system for dangerous non-food products, RAPEX, for Rapid Exchange of Information System, reveals in its weekly reports. In the 2012 annual report, released this September, textiles and garments accounted for 34% of the products found to contain dangerous substances. The apparel industry is the leading purveyor of non-compliant (non-food and non-pharmaceutical) products, with 668 notifications registered by RAPEX last year.

The European chemical directive came into effect on July 1, 2007. "It is an 800-page bible that comes with an additional 25,000 pages of guidelines representing an overwhelming mass of information to digest for an average-size company," said Thomas Rasch, the German Fashion Federation's general manager, speaking at a conference on REACh at TechTextil in Frankfurt last June. Addressing all, old and new, chemicals used to make consumer products, REACh is not directed only to the textile industry. Mr Rasch estimates that 30% of the "bad boy" chemicals deemed of very high concern are used in the textile and garment industries. Chemicals manufacturers have more duties than other companies, and those who manufacture in the European Union are have to meet more obligations than those who import finished products.

The directive's three rounds of deadlines actually began in 2010, when companies were required to register all chemicals placed on the market in annual quantities of over 1,000 tonnes. The May 2013 deadline covered substances used in quantities of 100 to 1,000 tonnes, and the final round, in 2018, concerns all chemicals sold by a company in Europe starting at 1 tonne per year. The two first rounds resulted in a total of 6,598 registered substances.

Watch lists

Chemicals that have been tested in the past, found not to be harmful and not requiring additional monitoring are the object of the first two letters of the REACh acronym, covering a single process of Registration and Evaluation. The "A" of Authorisation is the tricky one as it concerns chemicals considered Substances of Very High Concern (SVHCs) that will be forbidden and can only be used by special authorisation, granted on condition a substitute be sought. "The European authorities understand that companies need time to develop alternative solutions and don't want to put European manufacturers at an unfair disadvantage," says Mathieu Houdeville, the REACh expert of the Mulhouse section of French textile institute IFTH.

The SVHC comes with an accompanying Candidate List and two Annexes (XIV and XVII) inventorying the most dangerous substances. These impose additional obligations of companies, including the duty to inform downstream users of the risk, provide clear handling recommendations, and communicate information to consumers who request so in a maximum of 45 days.

These lists are periodically revised, with new substances added as the inventory of all chemicals found in products sold in European markets grows. "There were 15 SVHC substances in 2008, and 138 in 2012. We are expecting 300 to 400 substances to be categorised as SVHCs by 2020," said Mr Rasch. Mathieu Houdeville at IFTH Mulhouse believes the lists will include more than 500 substances



Two-thirds of the fabrics used by Mammut in its Fall-Winter 13/14 clothing range are bluesign approved, a certification system considered more restrictive than REACh.

Robert Boesch / Mammut

by 2018, "as of today 400 substances are already considered carcinogenic". PFOA, or pentadecafluorooctanoic acid, a substance well-known to sportswear and performance fabrics manufacturers, was added to the Candidate List of SVHCs on June 30, this year, for its suspected reproductive toxicity.

These lists pose many challenges to suppliers, says Saint Gallen-based auditing company bluesign technologies. The organisation strongly recommends keeping a close eye on updates and is itself vigilant regarding all textile-related substances. Changes in the list can lead the audit company to adapt its own Bluesign System Substances List (BSSL), which "based on our current knowledge," it says "is the most comprehensive textile supply chain relevant restricted substances list (RSL) that exists."

Impact on business

The first consequence of REACh has been to make some chemicals unavailable to the textile and garment industry. "The situation in 2018, at the final stage, could pose critical issues to some sectors," says Mr Houdeville, citing dyeing process chemicals that could be prohibited in Europe. He foresees that in some cases, the substitute solution will lead to higher costs and that production will then relocate outside of Europe.

In anticipation of future interdictions or responsibilities regarding information to downstream users and communication to consumers, companies have taken measures to remove as many suspect substances as possible. "One effect of REACh has been to discourage the use of all hazardous substances," says Mr Houdeville. "Companies are taking a pro-active approach by excluding any chemical on the SVHC and its Candidate List." These lists are effectively eliminating all risky products, he says, as the industry strives to favour greener chemistry.

A world of certification

In addition to heavy fines and possible criminal charges (punishable by up to three years in prison), the "bad boys" are often already forbidden by certification systems such as those delivered by Oekotex or bluesign technologies. Many companies and brands require their suppliers to be not only REACh compliant but also Oekotex Class 1 and bluesign certified.

For companies manufacturing in Europe, as well as those exporting to the EU, REACh is just one of many required labels, says Bernard Cugerone, general manager of JRC-Reflex, a maker of retro-reflective fabric and trimming. For companies based in Asia, Reach, Oekotex and bluesign have become a "passport" to the European market, says Geza Maklary, head of



French retailer Oxylane, the owner of Decathlon, has taken a pro-active approach to dangerous substances and hired staff to oversee chemicals use. This however has not eliminated all issues, as at least two products made by the company were recently found to contain dangerous substances (a cap and diving slippers).

Oxylane

Euroglobal Trading, an agency representing performance textile suppliers: "The impact of REACh is quite simple, if a product doesn't comply, brands won't buy it."

Enforced after the end of European quotas on textiles in 2005, REACh does not seem to have had any effect on limiting imports and favouring European-made products. "Many Chinese companies began doing business after REACh came into effect," says Mr Maklary. "They built their factories to be REACh compliant from day one." It gave them an advantage over older European factories built years before the European directive came into effect.

Inspiring others

Access to European markets has made REACh a global benchmark that is inspiring other countries to implement similar measures. The South Korean Act on the Registration and Evaluation of Chemicals, known as K-REACH (sound familiar?) comes into effect on January 1, 2015. The country has adopted a progressive calendar, comparable to the European directive, addressing the greatest tonnage and most hazardous substances first, followed by subsequent deadlines for lower volume thresholds every year from 2017 to 2020.

US-based Sustainable Apparel Coalition (SAC) is currently taking measures to integrate REACh standards. The Coalition has recently installed its European headquarters in Amsterdam and says it has already begun conversations with European member states to align the Higg Index more closely with EU policy on environmental issues. The new office is headed by Dai Forterre, a former head of sustainability at Asics Europe.

NGOs are also keeping a close eye on the European directive and pushing for more stringent measures. Greenpeace uses REACh to further its agenda, which includes the phasing out of PFCs in rain protection and stain release finishes and the Detox Fashion campaign. The International Chemical Secretariat, ChemSec, a non-profit organisation based in Gothenburg, Sweden, has issued its SIN list chemicals for "Substitute it now" since 2008.

The pressure is mounting, but the jury is still out on whether REACh speeds up innovation, as European authorities suggest, or complicates business, as voiced by some manufacturers. But since 2007, when the directive was deemed mission impossible, it now seems to be heading toward a mission made possible.

Biocides, the other directive

Biocides are overseen by a separate directive, which predates REACh, having come into effect in 1998. "Biocides are considered critical as they involve active substances that affect living organisms," points out Mathieu Houdeville, REACh expert for IFTH-Mulhouse, a French textile institute. On September 1, 2013, a new version of the directive came into effect, which he says, "has the merit, for textile applications, of clarifying their usage".

Acronyms to watch out for

SVHC or Substances of Very High Concern include endocrine disrupters and substances damaging the hormone system, as well as those deemed:

CMR: Carcinogenic, Mutagenic or toxic for Reproduction

PBT: Persistent, Bio-accumulative and Toxic

vPvB: very Persistent and very Bio-accumulative

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