

# REACH in the textile industry

Italy is the main European manufacturer of textile products, followed by Germany, United Kingdom, France and Spain. As the United States, it is the second largest global supplier of textile products, after China<sup>1</sup>.

The textile industry represents a distinctive aspect of the Italian and Chinese culture, and for several centuries characterizes trade relationships between these two countries.

The REACH<sup>2</sup> regulation, in force since June 1<sup>st</sup> 2007, is a further step towards the protection of the consumer's health and environmental protection, making the registration of chemical substances mandatory, and restricting the professional use to only those chemical substances which have been registered. This obligation has also a significant implication on the importation of chemicals, including, for example, textiles polymers, and on articles or article components.



Following the REACH regulation, companies will have the responsibility to provide the physical-chemicals and toxicological data necessary to assess the effect of the substances they would like to produce or utilize on human health and the environment, by means of an integrated system of pre-registration, registration and authorisation.

The new European Chemicals Agency (ECHA), will have the role to evaluate the registration dossiers provided by the companies, to accept or reject registration, and to define restrictions for the use of specific chemical substances.

<sup>1</sup> 1 SMI-ATI Federazione Imprese tessili e moda Italiana su dati ISTAT.

<sup>2</sup> Regulation (EC) No 1907/2006 of the European Parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

As REACH is a European regulation, its application range will be limited to substances produced, used or marketed in Europe. A company producing in a non EU country, and exporting into the EU, will have to comply with the REACH regulations only for the amount of substances/articles effectively entering the EU.



In practice, anyone producing in non EU countries, although not subjected to the obligations foreseen by the REACH regulation as "downstream users", must in any case register the substances and (in some cases) the articles he wants to export to Europe.

Summarising, in order to export into Europe extra-EU textile factories must meet the following requirements:

- 1) Chemical substances, preparations and, in some cases, articles produced in non EU countries, and exported to Europe, will have to be registered.
- 2) The presence in articles of certain hazardous substances, or of substances subject to restrictions if exceeding a certain thresholds of use or concentration in articles, must be notified.
- 3) Beyond the formal obligations imposed by the REACH regulation, it will be essential, for non-European industries to understand how REACH will affect their own business. In particular, suppliers must have the capability to provide their customers with all the information required by the REACH regulation concerning the substances or preparations sold to them. Firms unable to comply with this need may experience a reduction in their market share.

## Deadlines

The registration of substances and articles will formally start on 1st of June 2008, however "phase in substances" (substances already listed in the European EINECS database, or already placed on the internal market) may be "pre-registered" in the period 1st June 2008 - 1 December 2008 in order to benefit from a delayed registration deadline.

For pre-registered substances the following gradual introduction into the registration system is foreseen, depending on the quantities produced or imported:

- 2 years for the registration of chemical substances produced/imported in quantities  $\geq$  1000 t/year and for those classified as CMR (substances with at least one of the following properties: Carcinogen, Mutagen, or Toxic for reproduction)
- 5 years for substances produced or imported in quantities  $\geq$  100 t/year;
- 10 years for substances produced or imported in quantities  $\geq$  1 t/year.

PricewaterhouseCoopers, thanks to a consolidated collaboration with several Italian and European firms operating in the textile sector both in Europe and in China, has a wide knowledge of the sector needs and strategies, as well as that of the features of its supply chain.



## Which obligation for non EU industries?

Downstream users will need to ascertain that the substances they use have been registered by their providers. Moreover, for each substance used in the production process, the "Safety Data Sheets" will have to comply with the new REACH provisions; basically, the "Safety Data Sheets" must be updated with the exposure scenarios and the information specific to its use in a particular production process.

After REACH, only registered substances will be allowed to enter the European market or to be used in European factories. This will result in a significant impact on enterprises, in term of supply chain organisation, revision of import/export strategies, internal and external communication on the technical and environmental features of substances, etc.

## Wool and its chemical features

Wool is animal hair from the body of sheep. This hair is normally sheared once, or sometimes twice, a year and its quality and quantity varies widely, depending on the breed of sheep and its environment. Wool is a member of a group of proteins known as keratin. In addition to wool fibre, raw wool may contain:

- Natural impurities - Wool grease 2 - 25 % of greasy wool weight
- Suint (dried perspiration) 2 - 12 % of greasy wool weight
- Dirt 5 - 45 % of greasy wool weight
- Residues of insecticides, acaricides or insect growth regulators used as veterinary medicines to protect sheep from ectoparasites, such as lice, mites, blowfly, etc.



## Silk and its chemical features

Silk is derived from the silk worm, which spins a cocoon around itself. It is a protein fibre like wool and it is the only natural filament fibre to be used with success in the textile industry (the length of the thread is in the range of 700 to 1500m). The silk fibre is composed of fibroin filaments wrapped with sericine (silk gum), which has to be removed during the pretreatment.

China is the first world producer of silk. China, Japan, India, and South Korea together produce more than 90% of the world production of silk.



From the point of view of the REACH regulation, silk and wool are considered as substances which occur in nature, exempted from the registration. However, if treated by means of processes causing their chemical transformation, or if mixed with chemical polymeric fibers, wool and silk must be considered polymeric compounds whose monomers need to be registered.



### Registration or notification of articles to be exported in Europe

In order to verify the possible obligation to register or notify a substance in textile articles (following article 7 of the regulation), any producer or importer of articles shall submit a registration to the Agency for the substances contained in those articles, if both the following conditions are met:

- a) the substance is present in those articles in quantities totalling over 1 ton per producer or importer per year;
- b) the substance is intended to be released under normal or reasonably foreseeable conditions of use.

Concerning the notification obligation: any producer or importer of articles shall notify the Agency, for selected dangerous substances<sup>3</sup>, if both the following conditions are met:

- a) the substance is present in those articles in quantities totalling over 1 ton per producer or importer per year;
- b) the substance is present in those articles above a concentration of 0,1 % weight by

On request of a consumer, every supplier of an article containing any of above substances in concentrations exceeding 0,1 % by weight shall provide the consumer within 45 days from the request with sufficient information to allow safe use of the article.

<sup>3</sup> Substances which meet the criteria in Article 57 of the regulation



### Downstream users obligation and supplier communication strategies

A “downstream user” is any natural or legal person established within the EU who uses a substance in the course of its industrial or professional activities.

A downstream user may be for instance a factory using a polymeric fibre for producing textile articles.

For the downstream users in the textile industry, beyond the formal REACH requirements, one of the key issues is the verification of the available information from the suppliers, in order to ensure that all the substances and raw materials used in the production process have been registered and are suitable with the specific use. It is clear that, for the suppliers, providing their clients with all this information - the updated safety data sheet, the inclusion of exposure scenarios in the registration dossiers - will be a key issue.



## REACH: the key questions

How will REACH affect the business and internal organisation of my firm? What are the urgent actions and countermeasures? What are the available options to convert risks into opportunities? What kind of information will I have to provide my clients with? What are the risks of not providing such information?

Substance inventories	Assessment of the internal organization	Assessment of possible strategies
✓ List of substances used in the production process	✓ Project management	✓ Legal aspects
✓ List of produced substances or articles	✓ Team building	✓ Cost analysis and planning
✓ Gap analysis of available substance data	✓ Goals and functions identification	✓ Production strategies, including import/export
✓ List and analysis of uses	✓ Stakeholders identification	✓ Registration strategies
✓ Analysis of the information provided by suppliers	✓ Analysis and design of the Information System	✓ Strategies for participation in the Substance Interchange Forums
✓ Identification of the information that must be provided to clients and consumers	✓ Communication Targeting and design	✓ Communication strategies

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