

**The new EU chemicals policy and its consequences for  
leather producers**



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## **Summary**

The central instrument of the new European chemicals policy (EU White Paper) is to be the REACH system, which stands for **R**egistration, **E**valuation and **A**uthorisation of **C**hemicals and will apply to both existing and new substances. The system imposes on chemicals producers, preparation formulators and users in both trade and industry sweeping obligations to furnish proof and documentation, the aim being to improve safety for both humans and the environment in connection with the handling of chemicals. But this commendable objective can scarcely be achieved by the measures proposed because they entail loss of competitiveness for the processing firms such as tanners operating in the EU. The associated personnel and financial costs are so high as to be beyond the economic means of many companies, particularly small and medium-size firms (SME's). This applies not just to chemicals producers but also to formulators, dealers, and users. The production of high-grade niche products like leather will be the hardest hit. Should everything be implemented as set out in the White Paper, not only products, business sectors and jobs would be jeopardised but also the very existence of many tanneries.

## **Introduction**

For the REACH system to function there will have to be an exchange of application-related data on human and environmental exposure. This even applies to a chemicals user who would be required to disclose his information to his suppliers because they in turn are also obliged to provide the registration authority with exposure data for the purpose of risk assessment. It thus becomes clear that the new chemicals policy imposes an obligation not only on the producers of chemical substances, but also on all industrial and trade users of these substances, including tanners.

The registration costs arising will have the effect of reducing the number of chemical substances. And the reduction in the overall range of chemicals available will mean that formulators and preparation producers may no longer be able to procure given essential substances. The quality of chemical products will hence suffer and the tanner will be unable to manufacture certain types of leather in Europe because the necessary chemicals are simply not available - with adverse consequences for European leather processors and consumers.

The disclosure obligation extends only as far as the end-product of tannage (e.g. shoe leather) and hence exercises no control over the substances actually present in the items or commodities into which it is converted. This has further consequences of major importance. Imported leathers and products made from them do not come under the purview of REACh, nor does their manufacture and the use of chemicals. This has substantial advantages for competitors outside the EU, who can use untested chemicals without restriction for the commodities they make, including those for importation into the EU, thereby gaining a tremendous competitive advantage.

For the individual company - especially SME's- the cost burden likely to be incurred by REACh in connection with a chemical substance or formulation, or its non-availability, can mean that the end-product will be uneconomical. In particular this will affect finishing operations like the leather industry. Cost calculations, which have been carried out for different branches of industry graphically demonstrate the expected impact.

### Estimated costs of testing and registration

The EU Commission's expectation to date has been that the REACh system would burden the European chemical industry to the extent of roughly two billion Euro. Spread uniformly over a time span of 5-10 years and a total tonnage in line with official estimates this is a reasonable figure. From the industry standpoint, however, the financial burden looks quite different. Studies carried out by the VCI among the large German chemical companies came up with a figure of more than eight billion Euro. Shared among the individual chemical substances the registration costs constitute heavy burdens, depending on production volume, as shown in table 1.

1 -	10 t/a	ca.	50.000 Euro
10-	100 t/a	ca.	140.000 Euro
100-	1000 t/a	ca.	370.00 - 410.000 Euro
>	1000 t/a	ca.	650.00 - 740.000 Euro

Table 1: Estimated costs for individual substances, source VCI

The costs cover laboratory tests, data validation, investigations, exposure determinations, risk assessments, administration, documentation and the expense of negotiations with consortia and official bodies. In connection with these cost studies it was assumed that many of the test results already available can be entered in the registration dossier by the firms concerned.

The highly specialised leather industry uses mainly low-volume substances and formulations, which have to comply with the specific fashion and technical requirements of the end-products. If the financial outlay necessary for registration is related to production volume, it becomes clear that low-volume products in particular are especially hard hit. Depending on the respective volume the mean extra charge per kilogram produced or imported substance could be as listed in Table 2 on the basis of the aggregate calculated costs.

1 -	10 t/a	ca. 5.000 - 50.00 Euro per kg
10-	100 t/a	ca. 1.400 -14.00 Euro per kg
100-	1000 t/a	ca. 0.370 - 4.100 Euro per kg
>	1000 t/a	ca. 0.650 - 0.740 Euro per kg for 1.000 t/a ca. 0.065 - 0.074 Euro per kg for 10.000 t/a

**Table 2: Estimated costs of registration, source VCI**

This table carries a clear message. It means that for producers, formulators, trade and industry many products would become unprofitable and would therefore have to be discontinued. REACH is likely to banish specialities from Europe, even if the costs were to be spread over a period of five to seven years. Cost increases on the scale shown cannot be passed on to the end-product. REACH in its envisaged form is likely result in the disappearance of an extensive swathe of low-volume products and specialities in particular. The objectives of the new chemicals policy would hence not be achieved by the chosen modus operandi and medium-size chemical firms, processors such as tanneries, textile firms and many other branches of industry will be put at risk.

### Economic consequences

2000	Employment	Companies	Turnover (1000 EURO)	Export	Production (1000 m <sup>2</sup> )	
					cattle/calf	sheep/goat
Belgium	169	4	35667	73%	349	836
Denmark	150	1	20000	85%	725	n.a.
France	2583	84	325000	42%	6000	4150
Germany	3211	27	546000	48%	16000	incl.cattle
Greece*	1000	120	85000	20%	1300	2500
Italy	30300	2400	6300800	59%	168300	46550
Ireland	400	2	40000	100%	4080	67
Netherlands*	490	14	68800	70%	3617	n.a.
Spain	7399	223	1288570	39%	28300	20850
Portugal	1835	26	253219	18%	9593	1288
Great Britain	3400	43	580000	63%	11500	3200
Sweden	430	4	68500	85%	2600	n.a.
Finland	229	16	28214	42%	626	127
Austria*	1800	7	135000	100%	5000	n.a.
EU-total	53396	2971	9774770	60%	258001	79568

\*Netherlands 1996, Greece and Austria 1997

**Table 3, The European leather industry in the year 2000, source Cotance**

The leather industry in the EU is one of the largest suppliers of leather in the global market. As shown in table 3, the leather production sector with almost 3 000 factories and more than 50 000 employees achieves a sales volume exceeding 9 billion Euro in value. Europe's tanneries demonstrate their leading position impressively by their 25 % share of total worldwide leather production. Their output is appreciated for its quality and modern design, and it has a high reputation around the globe. European leather meets the highest quality standard, complies with the strictest environmental regulations, and can satisfy rising consumer expectations.

SME's dominate the EU tanning industry. Alongside those are a small number of big firms operating mostly on a worldwide scale. This optimum structure means flexibility in adapting to a constantly changing market. Technological leadership in fashion, design, quality and ecology together with outstanding raw materials are the key factors that contribute to the strength of the European tanneries. Ongoing modernisation of both plant and processes, excellent training and research are the reason for the global leading role of the EU leather industry.

Within the EU, Italy is the most important country in terms of number of companies, number of employees, production and sales. Italy accounts for 15 % of world output of cow-hide and calf leather, and 65 % of total EU leather production. Spain takes second place, followed by Great Britain, Germany, France, Portugal and Austria.

On a world scale, the European tanning industry is a high cost producer, but it is able to compete successfully in the market for top quality, high performance and special effect leathers because of its strength in technology, innovation and ability to meet its customers' requirements promptly and effectively. To maintain its competitive edge internationally, the European industry needs to be constantly innovating; this usually involves the use of specially formulated chemicals, and this is what the EU White Paper threatens to put at risk.

The stipulations contained in the EU White Paper targeting the European chemical industry have no parallel elsewhere in the world. Neither the USA nor Japan, both of them highly developed industrial nations, has regulations anywhere near as strict. Not to mention regions such as India, South-East Asia or China. The greater the difference becomes between the stringent requirements within the EU and the more flexible regulations in countries outside the EU, the greater becomes the pressure to export chemical production and processing operations along with jobs, with the very opposite safety and environmental consequences to those envisaged under REACH.

### **Environmental consequences**

The key starting material, raw skins and hides, is determined by the stocks of animals and the slaughter rate, and as regards availability depends primarily on meat consumption. Europe has the best quality raw hides. If processing capacity were to disappear from Europe there would be negative environmental repercussions in several respects: firstly the hides and skins would have to be carried further afield as they could no longer be processed within the region. Secondly more curing agent e.g. salt, biocides etc. would be needed to protect the material against putrefaction. This in turn would lead to commensurately increased effluent pollution in view of the additional

washing necessary before the material can be processed in the leather producing plants. The further erosion of European processing capacity would also entail abandoning the environmentally best-developed production plants worldwide.

Globally speaking the level of environmental pollution would be increased rather than reduced if the environmentally optimised plants had to close and the production transferred to locations with less stringent environmental and worker protection regulations. The plants operating within the EU have been able to reduce pollution of effluent and the environment to far below the expectancy values.

### **Loss of innovation**

Tanners in Europe have a long tradition in producing all types of leather from cattle hide and calf, sheep and goat skins. Their competence contributes to the success of leading footwear, garment, upholstery and leather goods brands.

In the last decade European leather industry introduced an extraordinary innovative developments. Innovation means not just that the leather producing plants are capable of turning out high-grade leather in tune with respective fashion trends in footwear, apparel or upholstery. On top of that, over the last few years the European leather industry jointly with the manufacturers of auxiliary agents has developed processes that are a further step forward in terms of environmental compatibility in addition to satisfying the high quality specifications stipulated. The enormous experience and the outstanding specialised know-how of European tanners and leather processors is demonstrated at important international exhibitions. And last but not least Europe is home to not just the most important chemicals suppliers and formulating plants but also to the leading institutes, research facilities and training centres. All this explains the unbroken, keen demand for their products in international markets.

### **Consumer protection**

The threat to leather production within the EU is a serious matter economically, environmentally and in terms of consumer protection. The use of new processes and novel chemical auxiliaries has already made the European Leather industry just about the least polluting and safest in the world from the aspect of both employees and consumers. Leather is, after all, a natural product.

The new more environmentally friendly types of leather in particular would be unthinkable without the availability of special chemicals. Chemicals are indispensable for the manufacture of leather. In the final analysis the leather producing plants within the EU would be unable to survive against international competition without the availability of suitable chemicals. That again benefits the consumer. As a case in point automotive leather trim has become a success factor for the European car manufacturing industry. There is also strong demand for recyclable leathers meeting specific requirements, or leathers with the Ecolabel which would scarcely have been feasible without European research and entrepreneurial initiatives.

If the European leather industry were to be seriously eroded by cheap imports, the end-effect would be a reduced supply inferior quality and less protection for the consumer. A standstill or decline in innovation would mean a loss of attractiveness for the natural product leather. It would also be unacceptable as regards industrial and environmental safety. Environmental and consumer protection organisations should have a common interest in the survival of high-grade European leather. Even without REACH we have a Europe-based industry turning out chemicals and daughter products in compliance with high quality, environmental and social standards, which is worth preserving.

### **Chemicals policy with reference to the leather industry**

The majority of the chemicals and auxiliaries used in the leather industry worldwide are nowadays produced by globally and locally active small and medium-size chemical firms and by big chemical companies with their headquarters in Europe. Product innovation is born in the respective development centres. Close cooperation with the European leather producers is a major driving force in that context and constant local contact a specific success factor.

The need for particular chemical substances to be available if the innovation factors are to be preserved and hence the EU location for the leather industry to be secured will be explained by reference to the following representative chemicals. Key requirement: for products intended for the leather industry a simplified REACH notification procedure must be applied which allows analogous consequences for similar substances. Concrete proposals for simplifying REACH are presented.

### **Natural substances, and their modifications**

Natural substances together with their synthetic counterparts and modifications are very important in the leather industry. In common with the substrate itself - hides or skins - the processing chemicals are frequently nature-derived or else taken straight from nature. They include vegetable tanning agents, animal enzymes as well as natural fatliquoring agents and their chemical and physical preparations. Many natural substances are obtained outside of the EU e.g. Mimosa, which is cultivated for wood production in plantations. Mimosa extract is a by-product and is used as vegetable tanning agent for orthopaedic and other special leather types. This may be not possible in the future, there is no replacement with the same performance.

Including these substances in the future registration procedure for chemicals would entail serious consequences for the leather industry. One can assume that under the terms of the future REACH chemicals registration scheme an extensive set of data will have to be provided for these substances. This will not be worthwhile for individual importers or dealers. Registration costs would put up the price of the product without any substantial extra knowledge being gained from the tests.

*Demand 1) Natural products and modifications must be exempted as a whole from REACh.*

New additional risks are not to be expected with natural substances. These substances have been used in leathers for centuries.

**Special formulations for leather**

The bulk of the leathers produced are finished to balance out natural flaws and inequalities in the material. In finishing, pigments are applied to the surface and fixed with a lacquer. Synthetic raw pigments are often available as master batches for further physico-chemical processing. The EU leads the world in pigment production. Leather pigments may have an extremely small field of application but they are highly specialised.

Each supplier prepares his colour formulations, as a rule comprising up to 20-50 % pigment and auxiliaries, to his own recipe to suit customer requirements. The chemical structure is known, the field of application is determined by the physical properties and the formulation. Since pigments have the same exposure in leather as in their main outlets plastics, printing, construction and metal lacquers, they could be registered for the whole range of applications and there would be no need for extra testing.

The same is true of all basic chemicals such as acids, alkalis, salts, detergents and solvents. This would entail a substantial simplification as against the REACh provisions as proposed because from the manufacturer's standpoint many substances used in leather production serve a niche market and do not have top priority status. Comprehensive exposure scenarios would be helpful in the case of many substances applied in leather manufacture and for which there are current data gaps.

*Demand 2) Exposure scenarios must be generally valid and not be established for any singular application*

Pooling of industrial and commercial use in one makes sense, because no different expositions are to be expected in the different application fields.

**Special products for leather**

Many special basic chemicals are made exclusively for leather. Roughly one-third of all leather is dyed brown, using resorcinol dyes to the virtual exclusion of all others. The leather sector is the main outlet for resorcinol dyes, accounting for more than 90 % of the total volume consumed. The less suitable textile dyes would increase the number of faulty dyeings and impair quality. They would be less likely to yield level, lightfast shades on upholstery leather.

A further product class are novel crosslinking agents for use in finishing. For reasons of environmental compatibility and worker safety innovative, solvent-free finishing has recently become more important and with it chemical crosslinking. Loss of access to crosslinking agents would mean that protective footwear and water-repellent leather could no longer be manufactured in the accustomed quality.

These examples can be extended arbitrarily with other essential pretanning and stuffing agents. Certainly, the market volume is small for specialities, but registration cost of approximately 2 Euro per kg is too high. Any attempt to recover these costs through leather prices would force the buyers to look outside of the EU for supply.

While there are several manufacturers of any given substance, the mode of production, isolation and finishing results in different by-product profiles so that the only objectively feasible way to form a consortium would be to allow whole substance groups to be registered as a single substance.

Notwithstanding this simplification of the notification procedure, the ensuing registration costs will put up the price of the product without any substantial extra knowledge being gained from the tests necessary in future that could not have been predicted without testing.

*Demand 3) Existing regulations for pure substances in niche market should remain: At least registration of whole substance groups should be possible in a new system..*

This same argument also applies to the polymers that play such an important part in wet and dry finishing. These substances must therefore be exempted from registration and the existing ruling retained.

### **Concerted action**

Regarding the intention underlying the new European chemicals policy, namely to provide improved protection for humans and the environment, extensive consensus exists. If this future policy is not to become a pitfall for the European chemical and leather industries, care must be taken to avoid creating an additional competition disparity between EU and non-EU countries. The same specifications for chemicals should also be put in place outside the EU and guaranteed within the framework of the WTO (World Trade Organisation).

For subsequent implementation, particularly in reference to products for the leather and other niche industries, a simplified REACH must be applied. Exemptions, higher duty-free allowances and analogous consequences for similar substances should be allowed. Additional testing should only be performed provided competitiveness does not suffer. The essential variety of substances at acceptable prices must be retained.

Buyers of high grade leather, as a rule internationally operating car, furniture, footwear, leathersgoods and leather clothing manufacturers, insist on compliance with their technical specifications. A forced switch to producer countries outside the EU would primarily affect medium and small-size finishing operations such as tanneries. Medium-size leathersgoods producers too would have to source their leather outside the EU, with the concomitant loss of flexibility and variety of products.

Country	Chemical sales in the EU in %
Germany	26
France	16
Italy	13
Great Britain	11
Spain	7
Remainder	27
Total	100

**Table 4. European chemical industry, source CEFIC (European Chemical Industry Council)**

Germany has the biggest chemical industry as in table 4 shown. According to a study carried out by management consultants Arthur D. Little a loss of at least 150 000 to a maximum of 2.35 million jobs would be entailed in Germany alone, depending on the final form of the proposed chemicals policy. Even if the structure of the industry for each country is different, unemployment figures in the EU, which are already high will rise still further.

Because REACH and the new EU chemical policy affect the very existence of companies and the employment situation, a broadly based political consensus must be reached. We are aware, that further proposals of the EU Commission on that matter are to be expected shortly. The chemical manufacturers and the users of chemicals (tanners, textile finishers and others) together with their employees should therefore be prepared and systematically contact their politicians, representatives on official bodies, and the media. All this should be done jointly with the various technical, professional, employers' organisations and trades unions in the interest of competitiveness, job security and the environment.

### **Acknowledgements:**

I am indebted in particular to the joined working group "Consequences of the new EU chemical policy for leather producers" team made up of representatives of the VDL (Verband der Deutschen Lederindustrie) VCI (Association of the Chemical Industry) and the TEGWA (Association of the Textile Auxiliaries, Tanning Agents and Detergent Materials) for extensive documentation, to Mr. Gustavo Gonzalez-Quijano of Cotance (Confederation of National Associations of Tanners and Dressers of the European Community) as well for UK chemicals industry Grant Darrie and for the UK tanning position, Paul Pearson, for fruitful discussions.

### **Further information:**

#### **Homepages**

[www.cefic.org](http://www.cefic.org)  
[www.cotance.org](http://www.cotance.org)  
[www.vci.de](http://www.vci.de)  
[www.tegewa.de](http://www.tegewa.de)  
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Update 30.06.03

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