



Climate Protection and Leather

FIRST EXPERIENCES WITH THE ENVIRONMENTAL CERTIFICATE ENERGY CONTROLLED LEATHER (ECO₂L)

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ECO₂L
Energy
Controlled
Leather

In recent years, the commitment of a company to climate protection has developed into a central competitive factor. This is a result of growing demands made by customers, financial investors and consumers. Besides other elements of sustainability, the main focus lies on the corporate emissions of greenhouse gas and the associated demand for a low CO₂ production method.

A certification of the actual Corporate Carbon Footprints (CCF) of a corporate location and the associated public orientated communication increasingly gives ecologically responsible companies a double competitive edge. This is based on the recognised cost reduction factors and an increasingly significant image enhancement by comparison with their competitors.

The Verband der Deutschen Lederindustrie (Association of the German Leather Industry) recognised the need for a certification of an energy-efficient manufacturing process at a very early stage. In cooperation with the Forschungsgemeinschaft Leder and I-T-G GmbH Gomaringen, the ECO₂L label for the documentation of a qualified CCF, and an energy oriented corporate policy was developed.

ECO₂L was the first -and still is - the only climate protection certificate that can be obtained worldwide and legally registered as a trademark for a tannery. The audits are carried out by an independent engineering company. The promotionally effective label certificate is issued after the

subsequent plausibility test by the non-profit and independent Forschungsinstitut für Leder- und Kunststoffbahnen gGmbH (Research Institute for Leather and Plastic Sheeting - FILK).

The prerequisite for awarding the ECO₂L label is the systematic determination of the corporate specific CCF of a tannery, being a comparison of the location and production related actual energy consumption with the benchmark Best Energy Efficiency for Tanning (BEET) in MJ/m².

This is in line with the "Best Available Techniques for the Tanning of Hides and Skins", as specified by the EU, and the BEET which establishes a strict standard reference value for the energy consumption of all production processes at a location within defined limits. With the help of BEET, a leather factory can therefore compare its own energy data to the benchmark. This enables the energy efficiency of the production processes to be identified by comparing the variance of the results.

To achieve a successful ECO₂L audit, the leather factory may not override the stringent BEET reference standard. The label is therefore aimed primarily at progressive tanneries, whose production policy is ecologically orientated and environmentally responsible.

The first ten audits and ECO₂L certifications for tanneries

Ten tanneries processing bovine hides

have been successfully audited and have received the label certificate from FILK.

These tanneries are located in Germany, Austria, UK, Spain, Poland, China and Vietnam, and all production processes were carried out in the factories. This covered a production mix that incorporated different ratios of raw materials and semi-finished products, and different finished stages such as wet blue/wet white, crust or finished leather. A common feature of all the tanneries was the creation of high quality leather for the automobile, furniture and footwear branch.

The deviations from international energy standard consumption were calculated for each respective production area in accordance with ECO₂L, and compared with the actual energy consumption. This showed that all of the ten tanneries performed with a lower energy consumption than the standard value by approximately 12%. Exceptions that achieved even lower energy use were achieved by leather factories with special energy supplies.

According to the type of production employed and the sub-processes performed, the specific CO₂ emissions for each m² of product ranged at levels below 4 kg CO₂/m². In this situation the product may be wet blue and crust manufactured at the location, as well as finished leather.

The decisive factors are - besides the CO₂ emission of the production process itself - the CO₂ emission within the CCF system boundaries. These boundaries are clearly designed for the ECO₂L of the upstream and downstream processes, such as the transport routes for raw materials and auxiliary agents, and waste disposal or water purification.

It should be noted that so far no tannery with complete production (raw hide up to finished leather) has been certified. Tanneries with one hundred percent complete production would naturally exceed the emission value of 4 kg CO₂/m² finished leather.

The average CO₂ emissions of the



companies investigated are distributed as shown:

- Share of CO₂ emission from the production: 76.5 %
- Share of CO₂ emission of the upstream transport: 20.1 %
- Share of CO₂ emission from the wastewater treatment: 8.8 %
- Share of CO₂ emission from waste/secondary product exploitation including energy recycling from waste/by-products: - 5.4 %

This shows that, as expected, there were considerable ranges of fluctuation. There was even a partially negative balance resulting from the respective local conditions (e.g. delivery distances, waste exploitation procedures, etc.)

Of decisive significance for the certified tanneries is that, besides the calculation of the CO₂ emission at the location, the comparison of the corporate specific energy consumption of the individual production steps with the benchmark. Here the tannery can clearly detect any potential for energy saving during the manufacturing process in percentage terms. For example, if the result determined is 10% above the BEET, the saving potential both in the energy consumption and with regard to the energy costs is likewise 10%.

From the detailed and confidential audit report, it will quickly become apparent to every tannery in any type of leather manufacture, and each step within manufacture, where adjustments or amendments can be made for the greatest saving potential.

New initiatives for proof of product sustainability

ECO₂L as a control instrument of effective energy utilisation is ahead of its time. Now initiatives to provide proof of the energetic sustainability of a product are also being developed at European and international level.

Consequently, the VDL, in cooperation with the European Association of Tanners COTANCE, will participate in a branch pilot as part of the project "Creation of an internal market for green products to facilitate better information about the environmental pollution from products and organisations" of the European Commission.

In the framework of this project, harmonised methods will be compiled for the evaluation and benchmarking of the environmental performance of individual branches. This is with the objective of

working out sector rules and system boundaries for a Product Environmental Footprint (PEF), an Environmental footprint from organisations (OEF). In this situation, the experience gained associated with ECO₂L will play an important part in the determination of a practically orientated and data-based result.

The mechanism to obtain the ECO₂L label

All future-oriented leather factories can obtain the label awarded by FILK. The auditing is conducted on behalf of FILK by independent and officially

designated auditors.

The path to ECO₂L is easy. Interested companies can find the relevant information at www.eco2l-leather.com in the form of a signpost to a detailed guideline. This provides basic data with regard to the structure and functional aspects of ECO₂L as well as an order form to request the audit, including the corresponding fees. Indicative test audits can also be requested as a service provision. The audit can be requested by all companies engaged in processing bovine hides, irrespective of the range and type of production. ●

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