

Produced under an exclusive patent by Reltex, a French company based at the foot of the French Alps, what distinguishes Lactae Hevea soles from ordinary crêpe or latex rubber soles? What gives them the added value and an aura that makes the products from the footwear brands that use them so exclusive?

Magic soles

Jenny Pickman

The company's origins go back to the 1950s, when a French plantation owner in Vietnam returned to France, convinced of the intrinsic value of latex soles, and determined to enhance the naturally shock-absorbing properties of the *lactae hevea* milk he had seen harvested and processed in Vietnam, for which soles were just one of the many applications.

Experiments began in M. Revolle's garage behind his home near Grenoble. These culminated in a unique refining process directly inspired by that of the cheese-making process and requiring twenty individual manual operations for each sole. Today the manufacturing facilities are larger and more sophisticated, but the process is not a great deal different.

A number of special ingredients are added to the hevea milk, which is then poured into a mould where it takes about a week to coagulate and dry. It is obviously a slow process and the resulting soles are therefore not cheap. The water is removed by thousands of tiny ducts, leaving a unique natural microstructure comprising millions of air cushions that act as shock absorbers. This is the secret of these soles.

Performance

Reltex claims that the suppleness and comfort thus obtained is unrivalled. The French technology centre for the leather and footwear

industries, CTC, located not far away in Lyon, carried out some revealing performance tests.

To measure the shock absorbing properties, an accelerometer placed on the tibia measures the effort required during walking in real time (*Figure 1*). The results showed lactae hevea soles absorb up to 50% of impact shock when the heel strikes the ground.

This is important as any shock to the heel is transmitted through the ankle and up the leg as far as the hip. Persistent shocks to the heel will therefore have an adverse effect on all these joints. Athletes and active people who walk a great deal are particularly at risk.

A further test was performed using a 50mm piston at between



Figure 1: Accelerometer test restitution

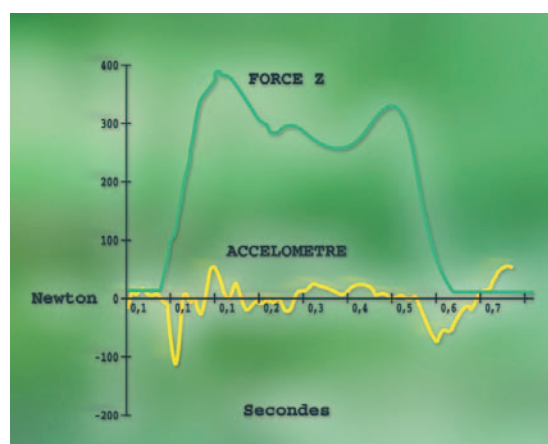
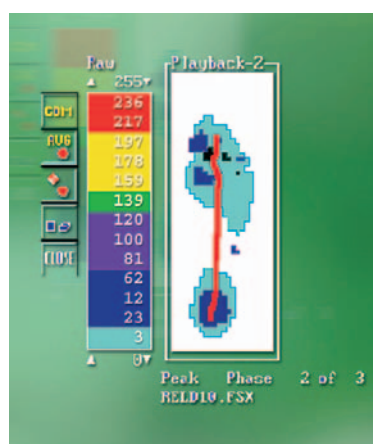
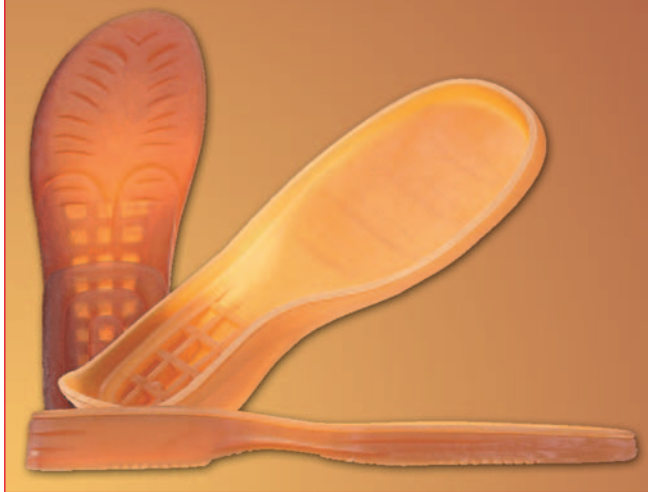


Figure 2: Test result showing 70% restitution



Lactae hevea is a totally non-toxic natural material which, if harvested properly, encourages the health of the tree and is ecologically sustainable. In simple terms the marketing message targets a selection of the reasonably affluent consumers current preoccupations: a sustainable natural material enhanced by hand crafted production, individual design and offering maximum comfort.



25 and 4000 N to simulate a cycle of compression and relaxation or, as CTC describe it, 'restitution of energy'. The higher the value obtained, the faster the sole will return to its original conformation, ensuring the durability of the comfort factor.

In the case of the lactae hevea soles, the results highlighted the excellent distribution of plantar pressure, resulting in 70% restitution of the energy expended by the wearer (*Figure 2*). The reduced pressure peaks also indicate that the wearer is less likely to feel any hardness under foot.

Current philosophy

Reltex was bought by its current owner M. Giroud in 1986 and continues to produce exclusively in France, using imported lactae hevea milk. The top-end comfort footwear producers are customers who see an obvious advantage in paying for extreme suppleness and comfort, combined with a customised design service.

Reltex works very closely with its customers' design teams, to produce individual moulds that give each brand its own models and individual distinguishing mark. The company's aim is not to increase volume but to maintain an optimal level at which it is able to provide not just a product, but 'a philosophy, an environment and the emotion associated with well-being'. 



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