

## FILAVA - A UNIQUE SOLUTION FOR HIGHER PERFORMANCE SKIS



FILAVA fiber is used in many different products, like bikes or racquets, in the sporting world; skis is one out of many where ISOMATEX has already many years of experience. ISOMATEX can assist ski manufacturers thanks to its know-how during the entire manufacturing process.

FILAVA fiber is the answer to the increasing worldwide demand for sporting goods where impact resistance, i.e. the **dynamic load absorption**, is one of the essential constraints.

FILAVA fiber with its excellent mechanical properties, **great overall dimensional stability, low weight, superior elongation at break in combination with its high tensile strength** makes it a flawless substitute to **aramid** or

**carbon** fiber products in many applications where it is used as reinforcement for composites dedicated to structural elements and subject to compressive or dynamic fatigue load.

The continuing pursuit of ISOMATEX for higher standards for end-user products gives FILAVA today an edge in term of not only **higher performance** but also in term of **safety** and **sustainability**.

In sporting goods and in particular for **new generation downhill, touring and cross-country skis** as well as **snowboards**, FILAVA made fabrics (woven or multiaxial) are already being used and provide tangible performance benefits translating to a greater rider experience while reducing cost.

### FILAVA's key benefits

At the end of several weight optimization studies, real-life applications and thanks to FILVA high mechanical properties and low weight, it was shown that using FILAVA fibers instead of conventional fibers as **glass fibers** and ordinary **basalt fibers** can reduce **the weight of the final product by about 40%**, which is often a great benefit for many skiers in term of performances and comfort.

FILAVA fibers offer a superior **elongation at break** which provides **flexibility** to the skis, a defining point for skiers giving them better performance during turns by reducing the motion time. In addition, FILAVA made skis increase **tenfold the "snow" feeling resulting in a great skiing experience**.

FILAVA fibers allow to reduce considerably **dynamic fatigue** due to vibrations, which gives skies a **longer lifetime**. FILAVA skis are also **safer** as they do not break as easily as standard skis, which is especially important for touring and cross-country skis.

FILAVA made skis can be bought today for **carving skis, powder skis and touring skis**; other skis are coming to the market soon.

FILAVA being reasonably priced especially compare to aramid and carbon, ski manufacturers can actually **reduce cost while offering a better product**. FILAVA allows also the use of fewer components while its handling process is especially smooth, reducing cost further.

Other high-end fibers, which can be also used for skis, are not performing adequately or to the level of FILAVA. Aramid fibers can cause an important humidity adsorption resulting in a loss of performance, while carbon fibers are considered too rigid (or too stiff) for skis providing only similar weight reduction to the detriment of performances and the skiing experience.

To summarize, FILAVA made skis offer higher performance and a greater skiing experience than existing high-end solutions while reducing cost thanks to a competitive pricing and easy handling. FILAVA is also 100% fully and easily recyclable for a full circle economy.

