

# Naue Glacier Protect

made of Secutex® Green

Glacier covers

Project name

Trial fields Stubai Glacier, Position Eisgrat

Cooperation between

Association of Ski Lifts,

Austrian Economic Chambers, Vienna, Austria

University of Innsbruck, Innsbruck, Austria

Naue GmbH & Co. KG, Espelkamp, Germany

Start of the trial phase

June 2022

End of the trial phase

September 2022

Products

Naue Glacier Protect in  
different product versions





Fig. 1: Trial field Naue Glacier Protect



Fig. 2: Arrangement trial field Naue Glacier Protect

The Stubai Glacier is a glacier ski area in Tyrol in Austria, at an altitude of up to 3,210 metres. The ski area is located northeast of the Stubai Wildspitze in the Stubai Alps. The total ski area is about 1,450 hectares. 205 hectares of the slopes are groomed. This makes it the largest among the glacier ski areas in Austria. Snow on the slopes can be guaranteed here from October until June.

## Challenge

Due to climate change, glaciers have been melting increasingly since the middle of the 20th century. The water in the glaciers melts and flows year-round into the sea via the river systems. If the glaciers were completely lost, it would no longer be possible to use the glacier runoff as a continuous source of drinking water. Likewise, the balance of the water bodies and the adjoining natural area would be severely disturbed.

In addition, the increasing retreat of the glaciers affects the pillars of the cable cars, which are partly founded in the ice. These transport day visitors, as well as mountain hikers, to the high alpine areas in winter as well as in summer. Consequently, protecting the glacier below the cable car pillars from solar radiation and other harmful environmental influences is essential.

Exceptionally high melting rates in the summer of 2022 have once again highlighted the urgency of glacier protection. Nonwovens have been successfully used for this purpose for many years. However, unlike in road and railway construction applications, the nonwovens are not covered and freeze to the surface. In a worst case scenario, the glacier gets „fibre fur“, and plastic fibres are released.

## Solution

With product innovation, Naue offers mechanically bonded separating and filter nonwovens that are 100% biodegradable and manufactured without petro-based plastics - in the spirit of environmental protection and sustainability.

Typical applications for our Naue Glacier Protect products are, for example, snow storage for the coming season or the above-mentioned foundation protection of cable car supports founded in ice.

For the purpose of testing the applicability of our Naue Glacier Protect nonwovens, test fields were set up in the „Eisgrat/Eisjoch“ area at an altitude of approx. 2,900 m in cooperation with the Fachverband der Seilbahnen, the University of Innsbruck and the Naue company

The construction of the trial fields started in June 2022, after the end of the ski season. A total of 5 trial fields with different Naue Glacier Protect product variants were arranged near the „Schaufeljochbahn“ to optimise the application areas.

At the end of the test, it could be determined that all test fields could preserve the snow or the glacier. They withstood the environmental conditions including foehn winds and remained dimensionally stable. They also showed no relevant soiling that would have led to a significant reduction in reflectance.

The evaluation of temperature measurements above and below the respective nonwovens confirmed an excellent insulating effect of Naue Glacier Protect made of Secutex® Green, which is equivalent to the solutions made of polypropylene nonwovens used in the past. This means that a field-tested, environmentally friendly, innovative sustainable product is now available. This product meets both the requirements for glacier protection and the justified demands for microplastic-free drains and waters.



Fig. 3: Trial fields directly after installation



Fig. 4: Trial fields in August 2022

Source: www.whiteframe-photo.com