FILIE® Materials made out of recycled car windshield.

Made with post consumer waste, Utilizing recycled PVB derived from car windshields and construction glass.

ROAD TO RENEWAL

FILIE

filie-material.com

FILIE

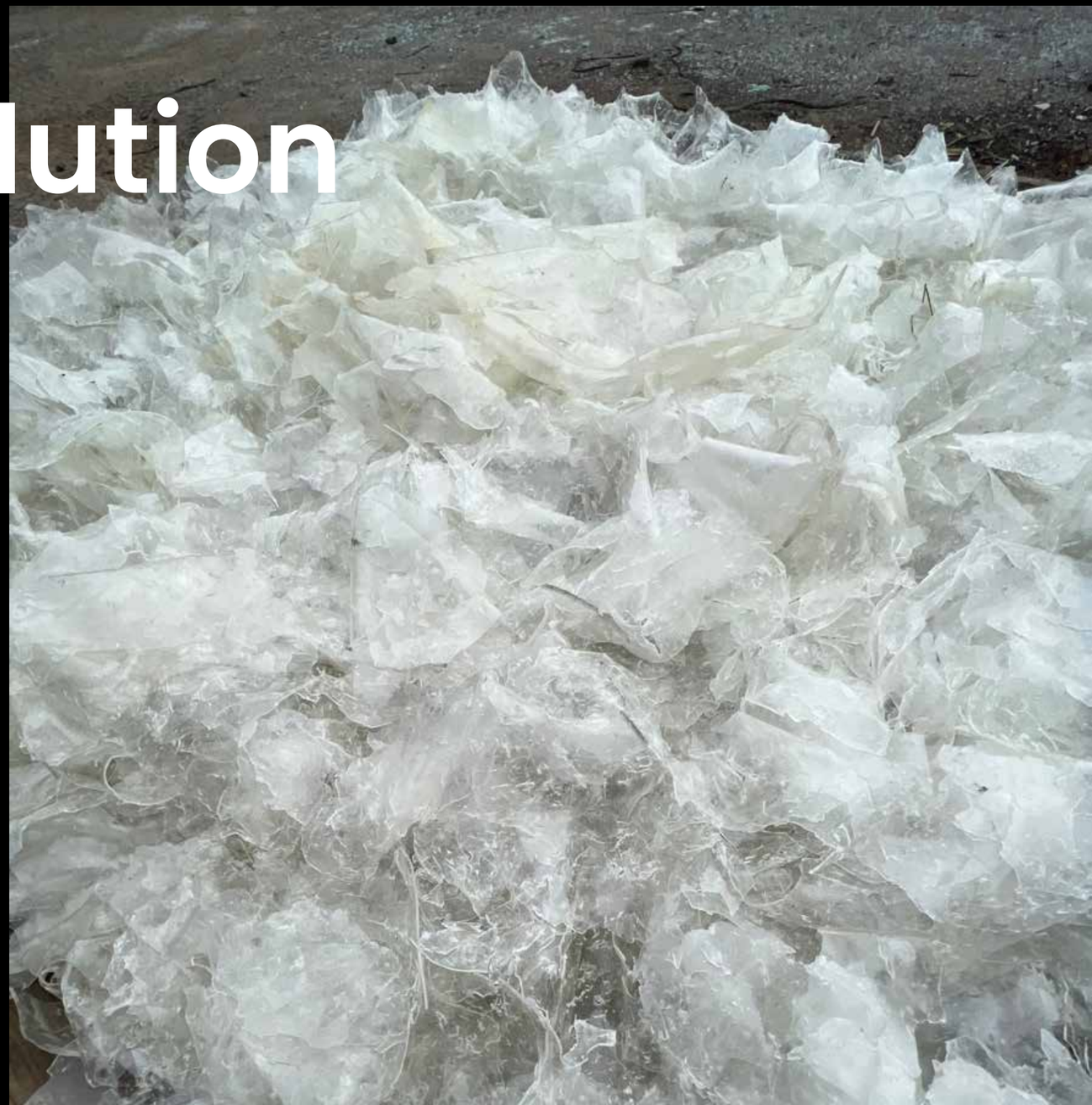
We look to source a more sustainable raw material that could meet the demand of users and the environment. We found it where we could not see.

To meet the growing demand for plastic and seeking more sustainable alternatives, The market of synthetic leather and foam has been growing ever since plastic entered mass production. We are providing a recycled solution for a more concious future.

FILIE

We found our solution in discarded car windshields.

We are using recycled PVB to replace many popular virgin petroleum raw material. Unlike other components of the automobile, parts of the car windshields have always been discarded instead of recycled. The separation process isn’t easy, and the value is undiscovered.



The majority of damaged waste windshields end up in landfills, where it takes approximately a million years to decompose in estimation.

FILIE

1 Billion+ vehicles in the world, all installed with laminated windshield

2 KG of PVB per vehicle on average, and even more in modern cars as laminated glass is used for side windows too

15K With the calculation of the worldwide yields in vehicle production and building construction industry, it is estimated that there are more than 15,000 tons of waste PVB generated on average per month worldwide

FILIE

End of life Vehicles(ELV) per year.

Europe

6+ Million

America

12-15 Million

Japan

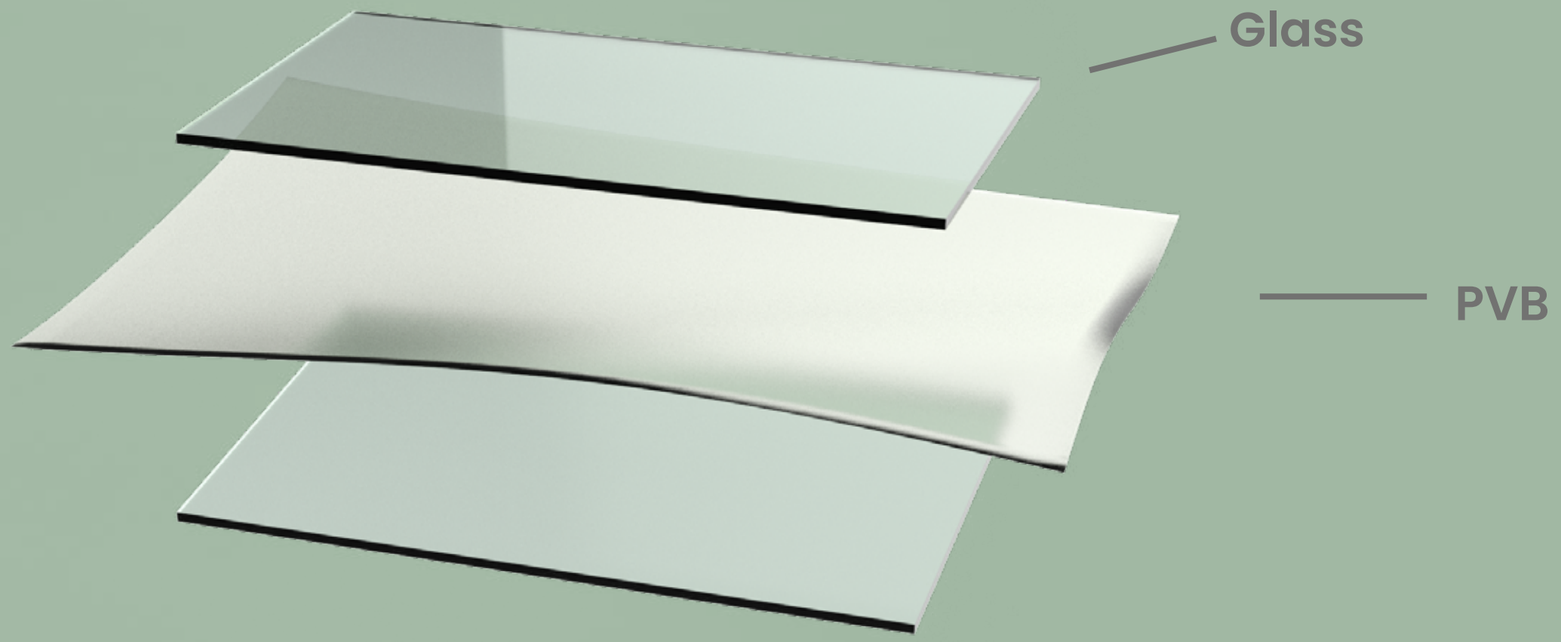
4 Million

Total ELV 2018

China

8 Million

Source: European Commission, Plastic industry association, Ministry of the environment Japan, ResearchAndMarkets.com 2018



PVB is a resin used to bind safety glass used in construction and car windshields

PVB (Polyvinyl Butyral) is a polymeric material with three different functional groups. Its unique structure provides versatility for broad applications. PVB has outstanding binding efficiency, toughness, flexibility, and excellent weather ability

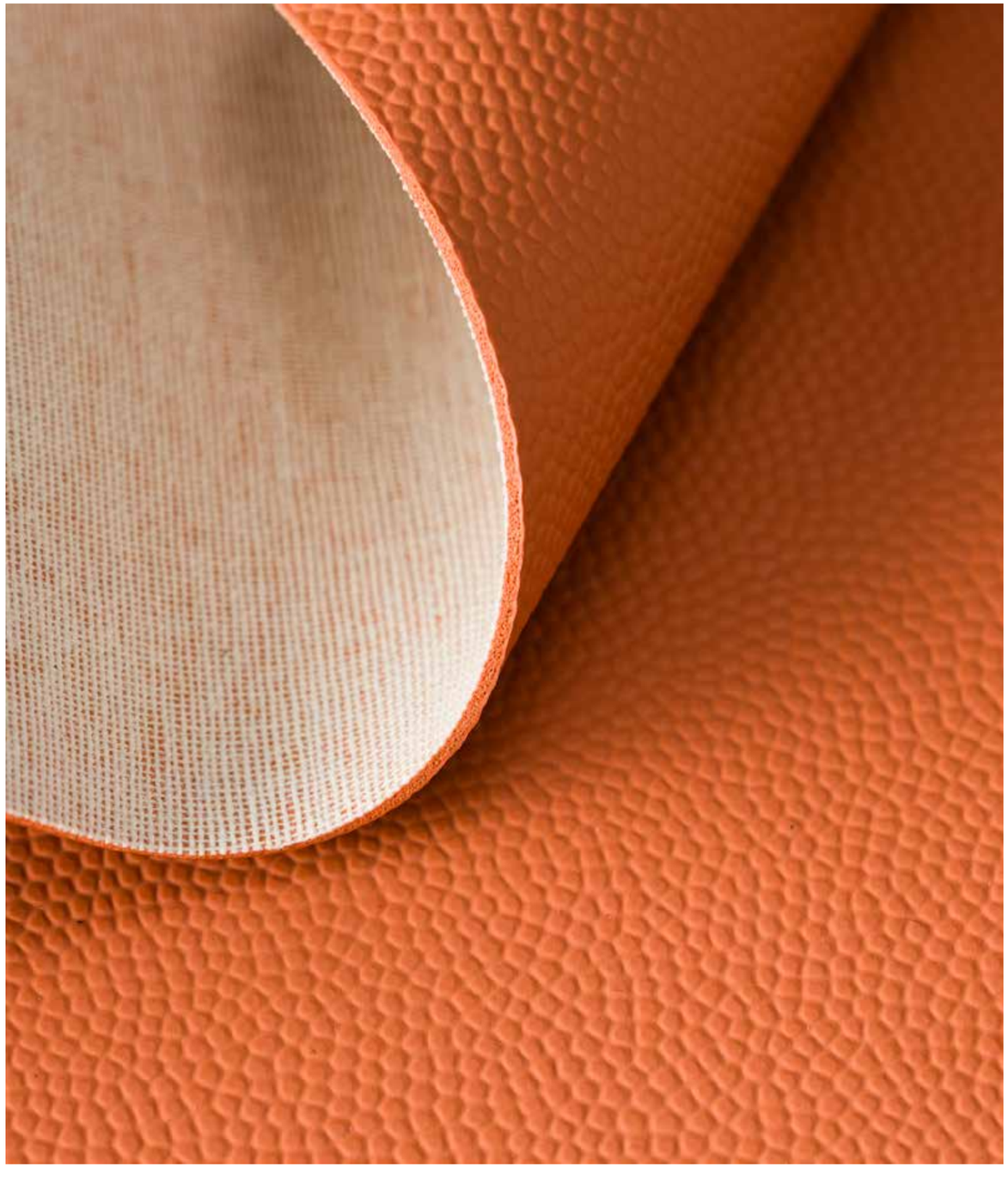
RECYCLE PROCESS

Waste Collection

PVB Separation

Pelletization

FILIE materials



FILIE®

Recycled PVB leather alternative are composed of three layers, each contributing unique attributes to the overall quality and aesthetics of the product. These layers are the surface Finish, Recycled PVB, and layer and base Fabric. Together, these layers ensure the recycled PVB leathers perform effectively and maintain a beautiful aesthetic.

Global Recycled Standard

ISPO Textrends Fall/Winter 2025/26 Best Product

FILIE® Foam

Filie® Foam has a unique characteristic that makes it feel comfortable and offers a grippy surface. Good impact absorption makes it great for products such as exercise mats. It can also be easily customized to suit various purposes.

Life cycle

Once the foam is discarded, it can be shredded and sent through a defoaming process, allowing the material to be reused.The defoamed material is then mixed with new recycled PVB pellets at a 50/50 ratio to create new FILIE® Foam.

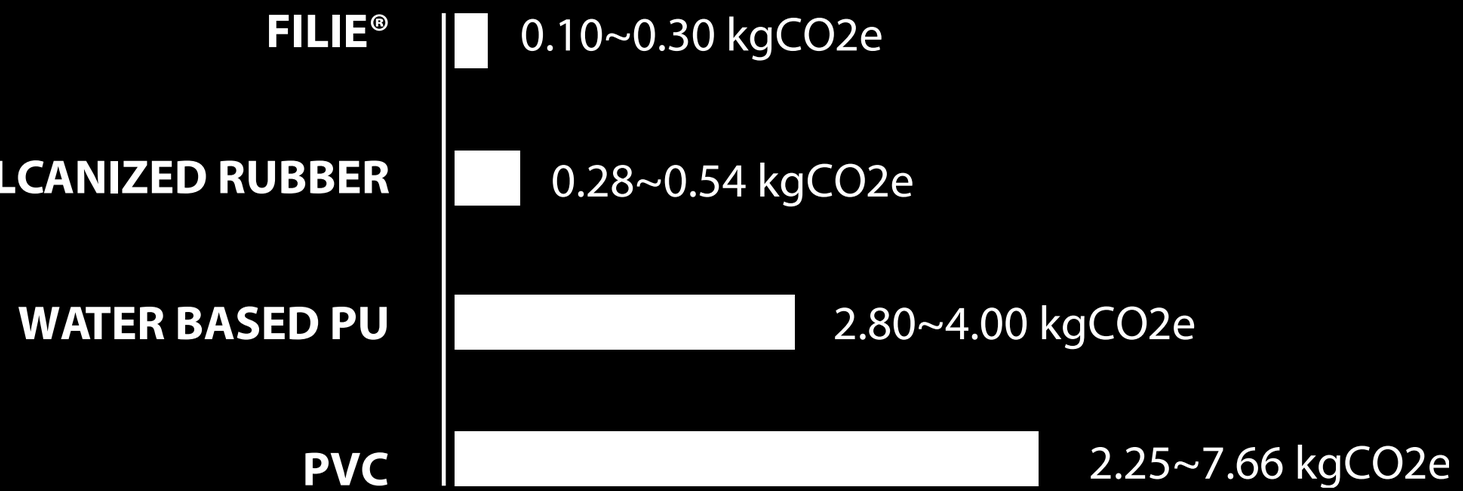
PRODUCT FEATURE

DURABILITY AND CUSTOMISATIONS

UNLIMITED COLOR OPTIONS

Recycled PVB films are translucent, as they were made for clear glass binding. This gives us the advantage of making them in any color and shades desired with good color matching.

CARBON EMISSION COMPARISON



The above data reflects the carbon emissions generated during the production of film materials, excluding the base fabric used for synthetic leather.

- The carbon emission comparison is based on the maximum value multiples.
- Due to differences in the manufacturing processes, various synthetic leather materials have different levels of carbon emissions.
- The above data was calculated by the LuTeq laboratory and holds a certain degree of accuracy, but the exact carbon emission data must be further certified.

FILIE Leather awarded for “best product” soft equiptment catagory ISPO textrend FW 2025/26

FILIE

PATENT

All FILIE materials are patented in cooperation with Lyude-recotec to prevent infringements and secure sustained profitable benefits for all our partners.

APPLICATION

Robust and durable. Engineered for ball sports

Basketball
Vollyball
Baseball

Yoga mat
Workout mats

Grippy surface
Cushioning
Foam Material

Bags, gloves and accessories

FILIE

Footwear

CHANG WONG
昌旺實業股份有限公司

ROAD TO RENEWAL FILIE

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In cooperation with Recotec-Lyude