

# Respectful management of resources



High performance polyolefin foams from Sekisui Alveo offer a wide range of environmental advantages and are used as a sustainable solution in various application fields because of its resource-saving benefits. Significant advantages are realized in various fields of industrial, construction, transportation and medical applications due to sustainable contribution which these foams offer.

## ENVIRONMENTALLY SOUND FOAMS

- ✓ They consist of environmentally friendly materials, are durable, and are free from plasticizers.
- ✓ They are non-toxic and do not require labelling. Special product lines are certified for direct contact with skin or food.
- ✓ They are lightweight. In many applications, e.g. in automotive, the weight savings lead to reduced energy consumption and thus lower CO<sub>2</sub> emissions.
- ✓ They are made in Europe, manufactured in Germany and the Netherlands in compliance with high environmental standards.

# 1'500 m<sup>3</sup>

less water consumption per year thanks to new cooling system in Bad Sobernheim

**Passion.  
Performance.  
Partnership.**

# 100%

renewable electricity in all production sites

# 1.3 MW

of solar power installed in Roermond

# 100%

less emissions of nitrogen oxides thanks to new catalyser system in Roermond



## Vision Sekisui Chemical

Sekisui Chemical Group is committed to reducing greenhouse gas (GHG) emissions. The group set a global target inline with acquired science based targets (SBT) certification in 2018, to reduce GHG emissions at the rate of 26% by target year 2030, compared with the levels recorded in fiscal year 2013. The GHG reduction target was further updated for Scope 1+2 (reduction rate 50%, 1.5°C target) and for Scope 3 (reduction rate 30%) by the target year 2030, compared with levels of fiscal year 2019. The global goal of the group is to accelerate its efforts to achieve zero GHG emissions from its business activities by 2050, through promotion of energy consumption innovation such as using renewable energy and through implementing innovative measures and processes.

## Our definition of sustainable management

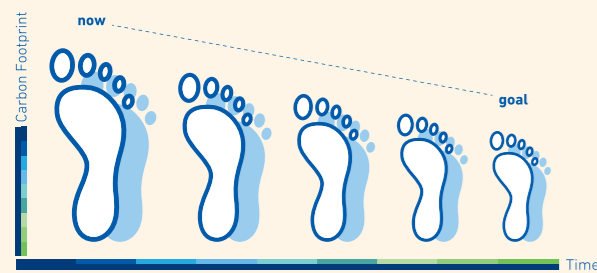
For Sekisui Alveo, a sustainable economic approach means a significant reduction of CO<sub>2</sub> emissions, compliance with European sustainability criteria („Green Deal“ / Circular Economy) and the improvement of the environmental balance by reducing the use of fossil raw materials.

The safety of people and the environment is a prime concern of Sekisui Alveo. It shapes our company, the products and service we offer, and our forward thinking.

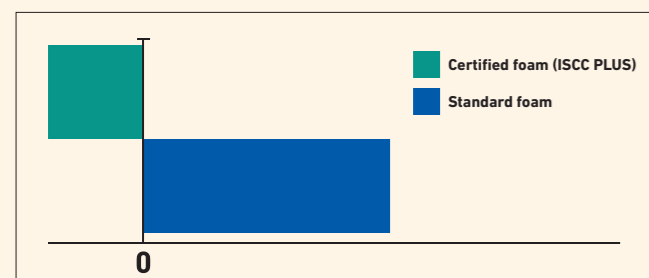
We invest in outstanding products and are committed to the sustainable and responsible use of resources.

## Life cycle assessment (LCA) and product carbon footprint (PCF)

In our efforts to realize sustainable management, we perform life cycle assessments (LCA) consistent with ISO 14040 and ISO 14044 following different LCA phases. The modelling approach and the results go through extensive external quality assurance check. We calculate and document the product carbon footprint (PCF) using the cradle-to-gate scope as per ISO 14067 and we provide carbon footprint information for most of our foam products to our customers.



The use of certified sustainable circular materials reduce the carbon footprint of our foams. We use ISCC PLUS certified bio-circular feedstocks (based on waste/residues along the supply chain) to produce mass-balanced foams with a significantly reduced product carbon footprint (ISO 14067).



Example of PCF in kg CO<sub>2</sub> eq. / m<sup>2</sup> foam



## Sourcing

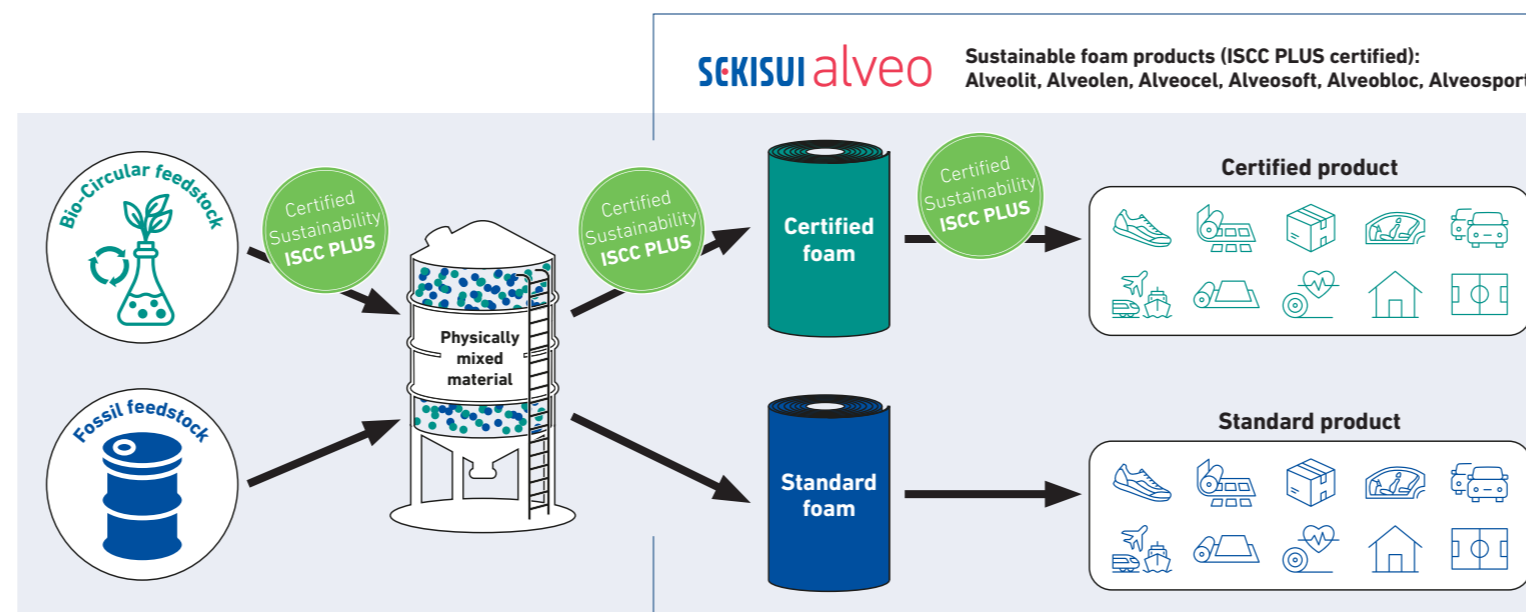
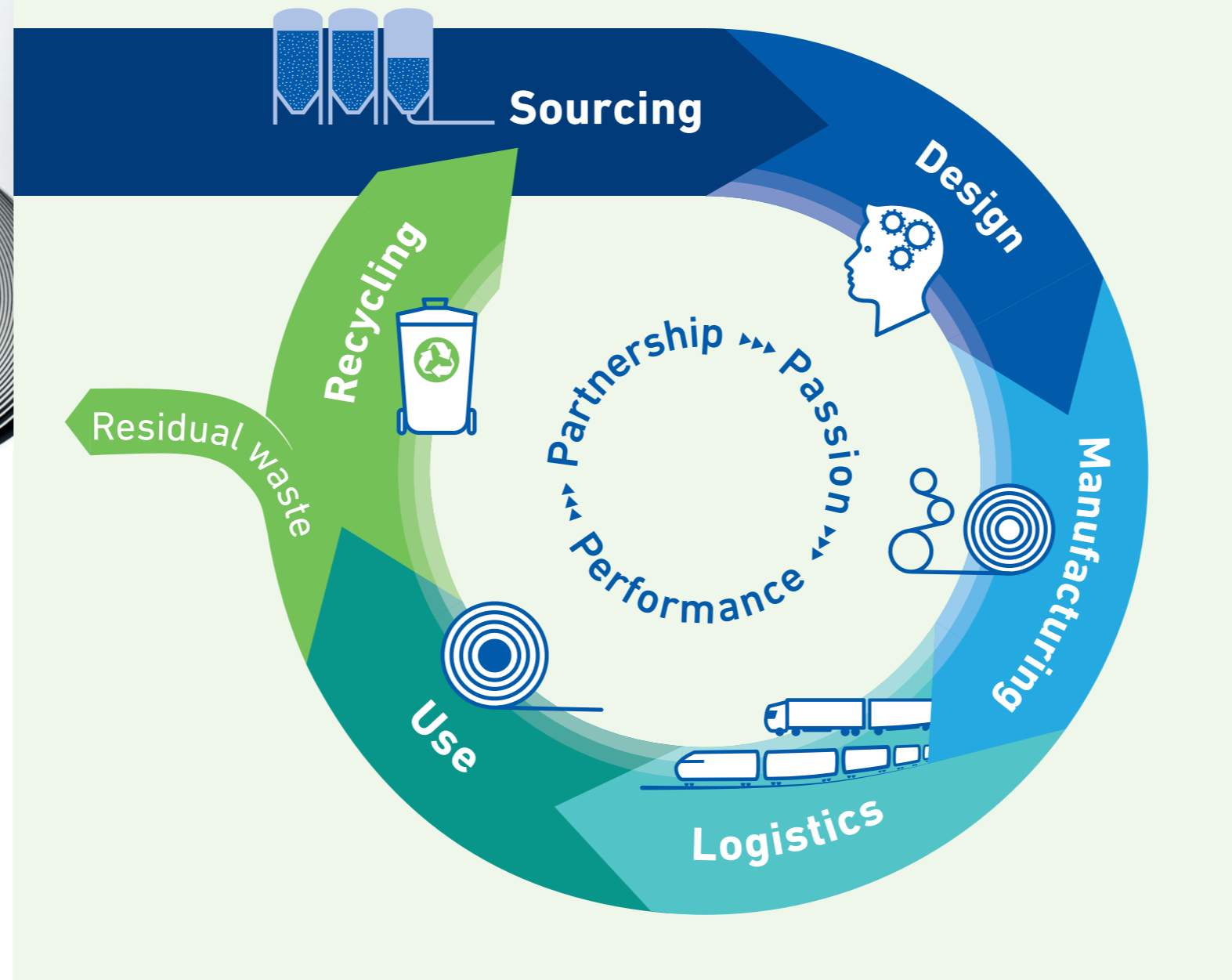
We select our raw materials and suppliers under strict aspects of sustainability. Sekisui Alveo conducts regular assessments on various sustainability and regulatory issues and integrates the outcomes for future product improvements. These advantages are then passed on to our customers along the supply chain.

## Certified sustainability

To reduce the carbon footprint of the raw materials significantly, we work with our suppliers in saving the fossil feedstocks and replacing them with circular feedstocks during the manufacturing process of these raw materials. To enable this, Sekisui Alveo choose the certified sustainability approach (ISCC PLUS) to support the accelerated transition to Bio-economy and Circular economy along the entire supply chain.



In simplified terms, the ISCC PLUS mass balance approach works like renewable electricity at the energy supplier – but for raw materials to produce polymers. Just as the energy supplier must ensure this by mixing renewable electricity in the energy supply chain, the polymer manufacturer must mix sustainable material flows to replace the fossil feedstock. Depending on the proportion of the sustainably produced material stream mixed and documented according to the principles of mass balance, the producers can sell the finished polymer with an ISCC PLUS certificate. The product itself does not differ from the polymers produced from a conventional feedstock. The product meets all the regulatory compliance as before and can be used for all applications. Certified Polyolefin foams produced using these certified sustainable materials also do not need any requalification or recertification by customers.



## Design

Our high-performance polyolefin foams are optimised for recyclability and demanding applications. We are constantly striving for smarter solutions reducing environmental impact for example in the following fields:

- Mono-material concepts for improved recyclability
- Same performance with reduced density to conserve resources
- Light and stiff materials with enhanced surfaces
- Sandwich core materials for lightweight applications

## Manufacturing

We continuously monitor emissions from our production facilities to minimise environmental impact. We are steadily increasing our efficiency in production, reducing the use of energy and raw materials and thus our environmental footprint.

We constantly monitor manufacturing KPIs like waste, energy and water consumption. These figures allow us to define improvement projects measure our progress.

We are steadily investing in our own energy production (heat recovery, solar). We use 100% renewable electricity from local suppliers for our foam production.

Our production plant in Bad Sobernheim has recently commissioned a new cooling system that has reduced water consumption by more than 50% and eliminated the need for various chemicals which were required in the old „open“ cooling system.

All these measures reduce the carbon footprint of our products.



## Logistics

We commit to local production in Europe. By optimizing our transport planning, we save hundreds of truck kilometres every year. To reduce CO<sub>2</sub> emissions even further, we have trucks available with green fuel and high-volume trucks.

## Use

Specific customer needs require individual solutions. Research and development are in our core DNA since more than 50 years. As a foam expert and solution provider, we help you to design sustainable strategies and applications.

Our foam saves resources in many end applications and offers various environmental advantages:

- Halogen free flame retardant solutions
- Lightweight solutions
- Products in compliance with latest regulations
- Low emissions
- Thermal insulation
- Impact protection
- Durability, chemical inertness, stability
- High performance at low area weight

## Recycling

Sekisui Alveo pursues the goal of zero production waste. Besides the efficient usage of raw materials and energy, we promote the reuse, recycling and recovery of waste. For example, our Alveocel foam waste is reused in the company's own manufacturing process since a long time. Alveolit and Alveolen production waste can be repurposed into alternative products.



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