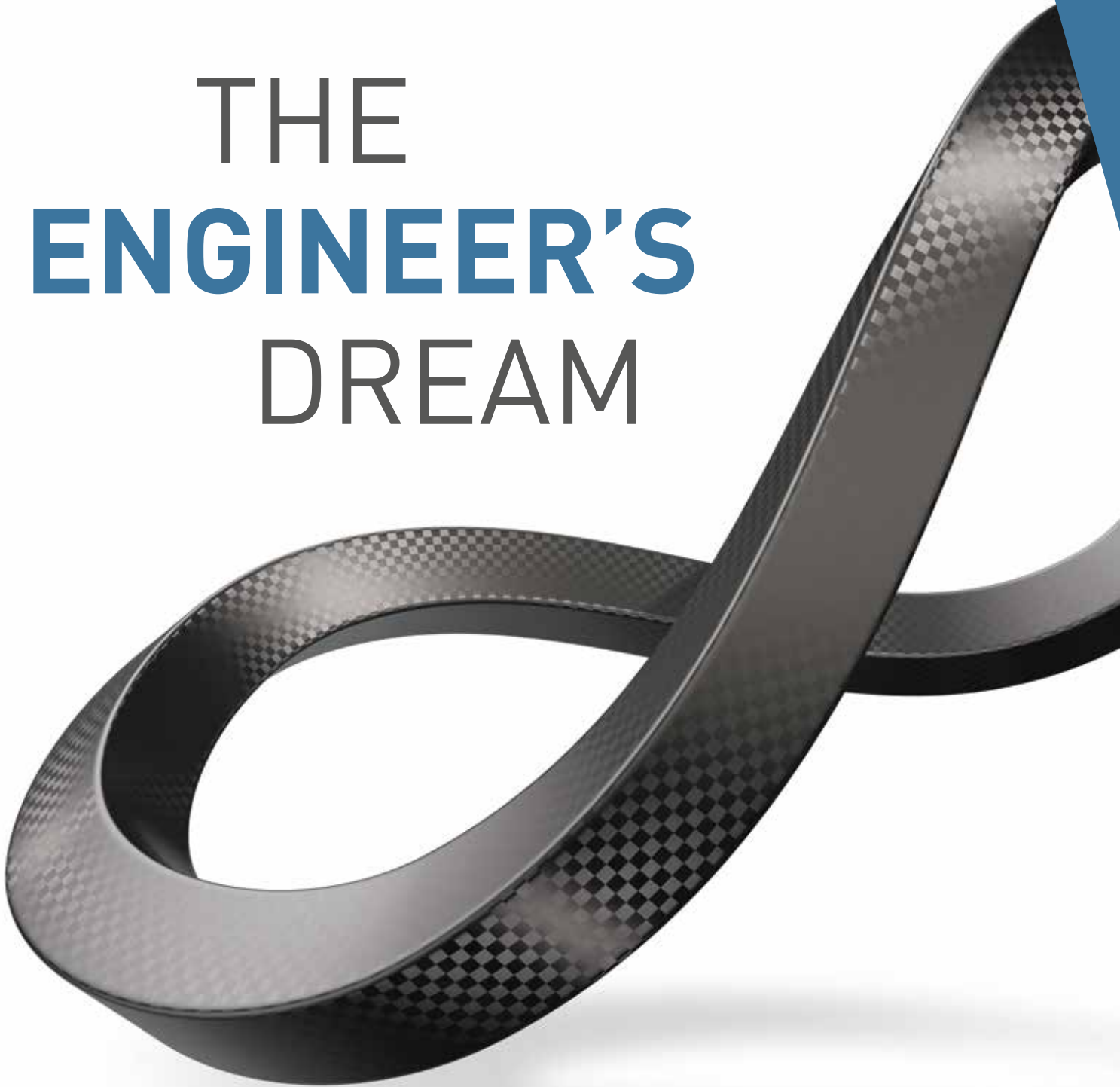


**W8SVR**  
WEIGHTSAVER

THE  
**ENGINEER'S**  
DREAM





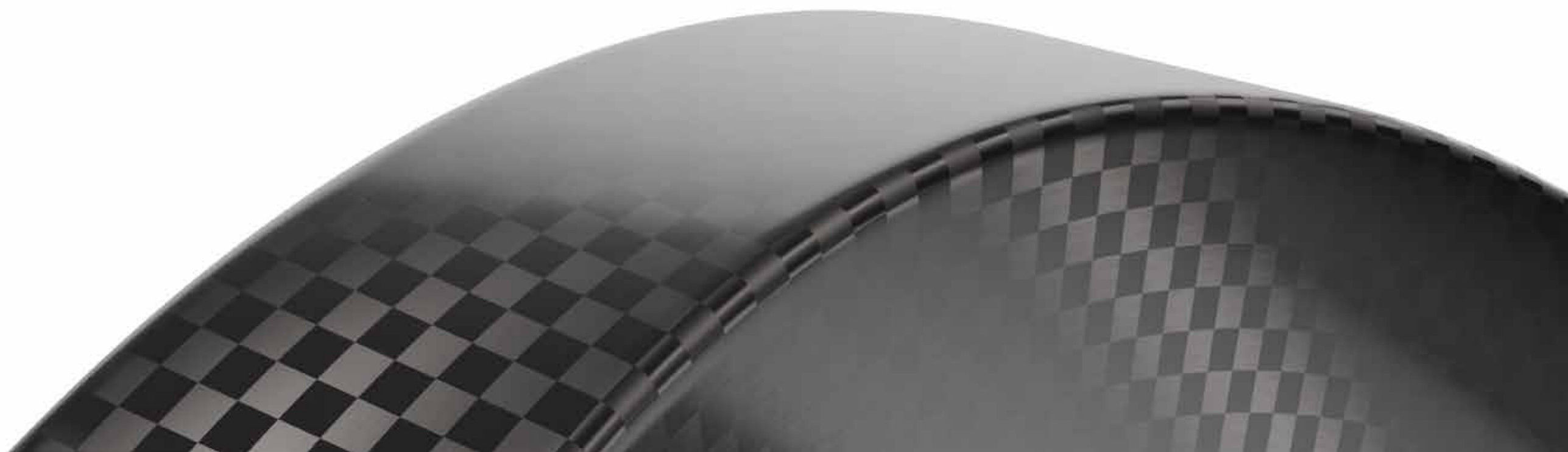
# THE **NEOLAMINATE** FOR LIGHTWEIGHT THERMOPLASTIC APPLICATIONS

## EVOLUTION OF THERMOPLASTIC COMPOSITES

Neolaminates are continuous-fibre-reinforced thermoplastic (CFRTP) composites, developed as a refinement of organosheets. They are lighter and more efficient than older-generation composites. This superior performance is achieved through the use of so-called "UD tapes", i.e. pre-stretched continuous fibres unidirectionally arranged in a polymer matrix. Neolaminates offer an exceptional surface smoothness and lend themselves to mass production thanks to their short cycle times. As wovens, they are particularly useful for accommodating complex and deep geometries while X-Ply laid fabrics can be tailored to requirements using near-net-shape fabrication technology.

For engineers and product designers, Neolaminates open up a wealth of new options for delivering lightweight assemblies with very high strength and stiffness properties.

W8SVR® Neolaminates are stronger, lighter, stiffer, smoother and tailor-made.



LESS  
IS MORE.

FASTER  
LIGHTER



## UNBEATABLE PERFORMANCE WITH A LIGHT TOUCH

W8SVR - the slimline name says it all. The constituent raw materials and special manufacturing technology combine to deliver supreme lightweight construction potential, currently unmatched in the thermoplastic-composites-market.

W8SVR uses less material to achieve the same strengths as older-generation composites. The untwisted, unidirectional arrangement and polymer coating of the individual filaments allow a more efficient exploitation of the continuous fibres.

Also feeding into the production process is the know-how and experience gathered from 150-plus years of technical textile manufacture and coating. W8SVR – a lightweight with unbeatable performance.

Up to 20%  
less weight\*



# STRONGER

STRENGTH IS  
NOT A FUNCTION  
OF WEIGHT.

## MUSCLE-PACKED MULTIFILAMENTS

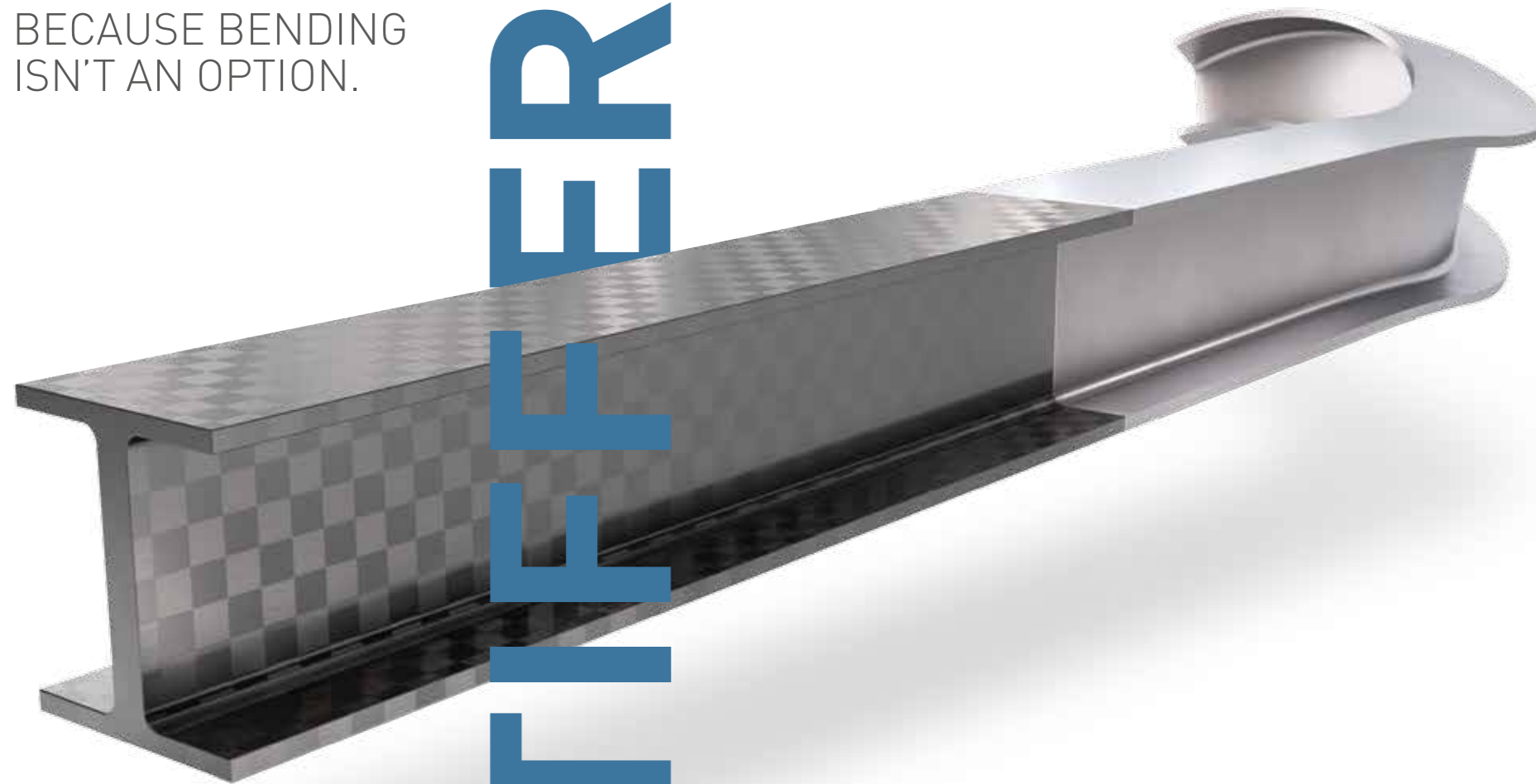
W8SVR exhibits higher strengths per unit weight than either organosheets or steel. This is due to the unidirectionally arranged, pre-stretched fibres that are simultaneously activated when subject to tensile forces. Added to this is the particularly strong internal bond between fibres and polymer matrix material. The combination of strong internal bond and direct mobilisation of all fibres ensures that the acting forces are optimally accommodated.

In providing the required strengths, W8SVR X-Ply laid fabrics can also be purpose-configured in line with the magnitude and direction of the acting loads. W8SVR is impressively strong.

Up to 20%  
higher strengths\*

BECAUSE BENDING  
ISN'T AN OPTION.

STIFFER

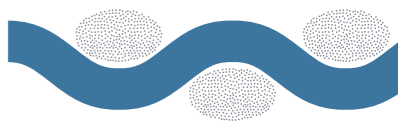


## STAYS IN GOOD SHAPE, EVEN UNDER PRESSURE

W8SVR retains its shape long after other materials would have suffered deformation. Its tremendous flexural stiffness is achieved by pre-stretching the constituent fibres, which are subsequently processed (virtually) without undulation using special manufacturing technologies.

The deformation under load of W8SVR is therefore up to 35 % lower than for older-generation composites.

Up to 35 %  
less deformation\*



Undulation with older-generation  
thermoplastic composites



No/low undulation with W8SVR



TRUE MARRIAGE  
OF FUNCTION AND  
AESTHETICS.



# SMOOTHER

## A PERFECT FINISH IN EVERY SENSE

W8SVR meets all primary functional requirements in terms of strength, weight and stiffness, without making any compromises on aesthetic appeal. Visual appearance plays a key role for many composite parts, as the aesthetics of the visible surface of the part greatly influence the perceived product quality.

Thanks to their special manufacturing process, W8SVR Neolaminates can be produced in very thin form with particularly smooth surfaces. This evenness makes them particularly eye-catching. If so desired, the surface can be additionally finished with films or coatings. W8SVR meets the highest standards in terms of aesthetic design.



Outstanding surfaces at W8SVR

# TAILOR-MADE

ATTENTION TO  
DETAIL AS RECIPE  
FOR EXCELLENCE.

## SEIZING THE OPPORTUNITIES OF FLEXIBILITY AND CUSTOMISATION

Cutting costs, reducing weight, boosting performance, improving the aesthetics – most standard solutions are unable to reconcile these aims. W8SVR production can be tailored to requirements while efficiently meeting all financial and functional demands. They offer incredible flexibility:



- Use of different raw materials (glass, carbon etc.)



- Full configuration in line with acting loads, with tensile strengths in any required direction



- Waste minimisation through tailored blanks in near-net-shape



- Functionalised surfaces with UV resistance, scratch resistance, gloss effects, various colours and compatibilities with other materials

## W8SVR BENEFITS AT A GLANCE

### PERFORMANCE

- Extremely low weight combined with high strengths
- Dimensional stability due to outstanding flexural stiffness
- Project-specific selection from a range of raw materials

### COST-EFFECTIVENESS

- Suitability for mass production thanks to short cycle times
- Waste minimisation through near-net-shape production
- Recyclability

### PROJECT-SPECIFIC MANUFACTURE

- Full configuration in line with acting loads
- Wovens and laid fabrics
- Possibility of functionalised surfaces

### FURTHER PROCESSING

- Fabrication of complex product shapes and building elements
- Suitability for hybrid moulding
- Product widths of up to 2.80 m

### AESTHETIC APPEAL

- Exceptional surface smoothness
- Wide diversity of design options

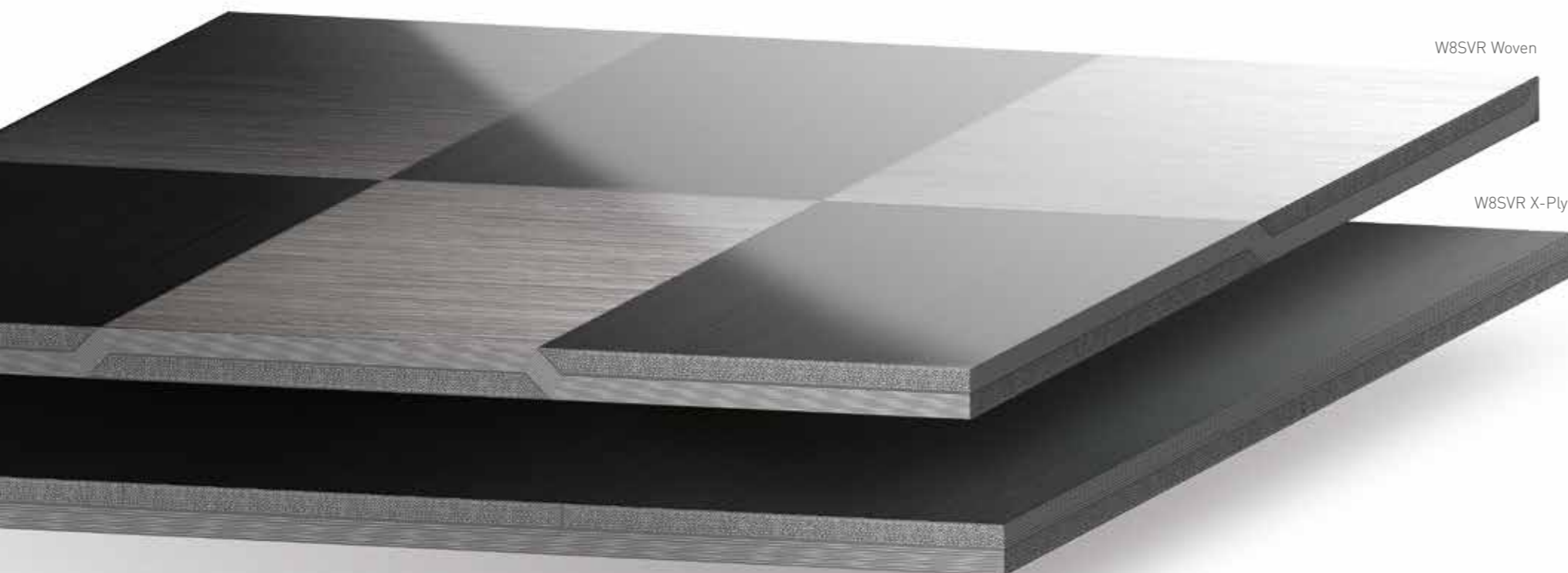


## HUESKER

The HUESKER Group is one of the world's leading manufacturers of geosynthetics and technical textiles. The corporate head office of the HUESKER Group is located in Gescher (Westphalia), Germany.

As a globally active company, the Group has ten subsidiaries and cooperates closely with trading and distribution partners in more than 60 countries. HUESKER has been shaping international markets as a pioneer of textile weaving for over 150 years. The HUESKER Group substitutes conventional massive construction with sustainable and intelligent solutions based on modern, high-performance technical textiles and composites. First-class engineering services, high competence in manufacturing, coating as well as tailoring of technical textiles, and an innovative spirit are the key to HUESKER's success.

In the field of composites, the company specialises in the production of Neolaminates. Under the W8SVR brand, HUESKER offers thermoplastic composites made from UD tapes, developed as a refinement of organo-sheets.





W8SVR® is a registered trademark of HUESKER Synthetic GmbH.  
HUESKER Synthetic is certified to ISO 9001 and ISO 50001.

\* Compared to older-generation composites.

Source: HUESKER Synthetic GmbH testing laboratory 01/2019

---

**HUESKER Synthetic GmbH**

Fabrikstraße 13–15  
48712 Gescher, Germany  
Phone: +49 (0) 25 42 / 701 - 0  
Fax: +49 (0) 25 42 / 701 - 499  
Mail: [info@HUESKER.de](mailto:info@HUESKER.de)  
Web: [www.HUESKER.de](http://www.HUESKER.de)

 **HUESKER**  
Ideen. Ingenieure. Innovationen.