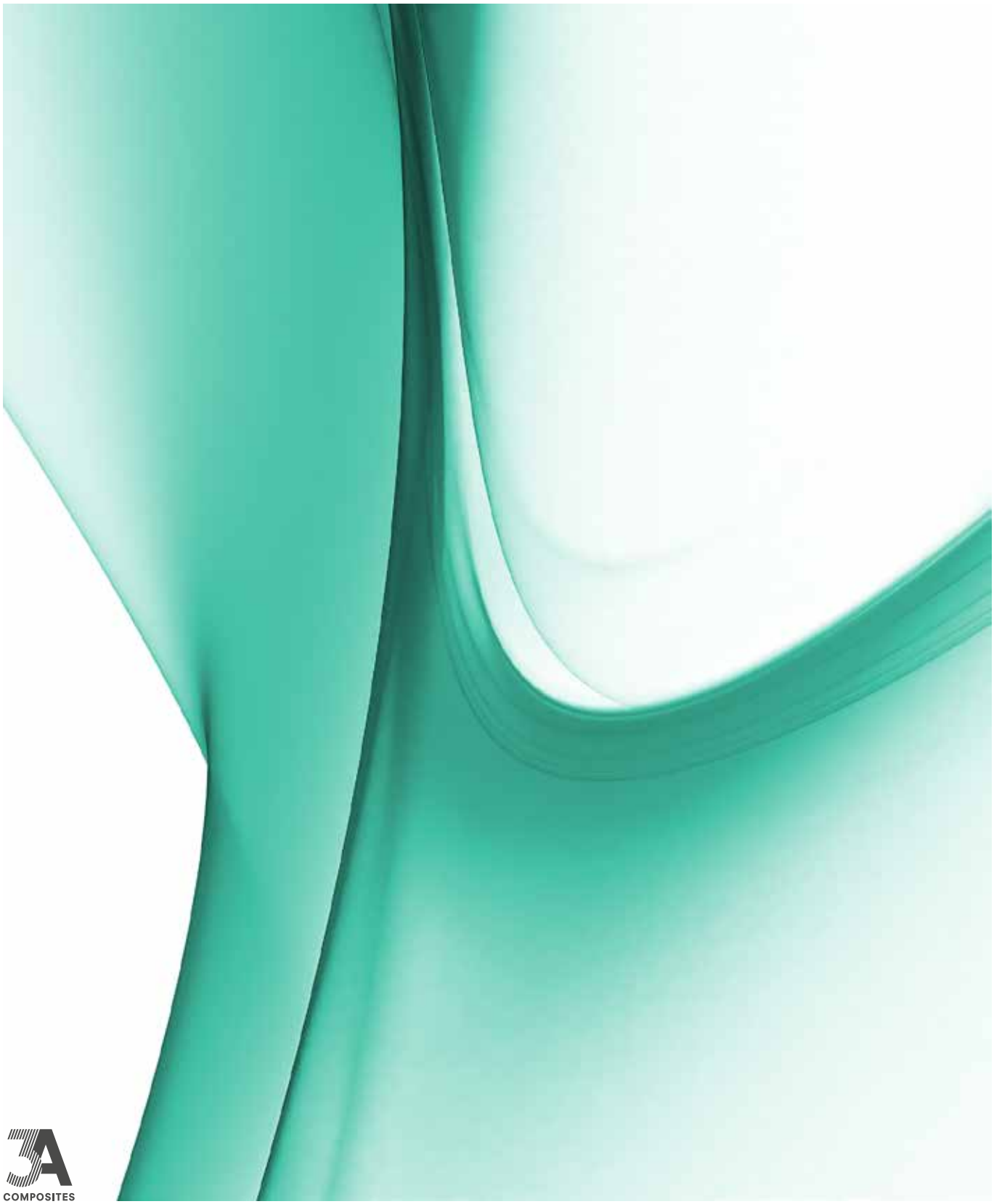
SINTREX®

PRODUCT GUIDE

THE INNOVATIVE SOLUTION FOR VERSATILE PRINTING APPLICATIONS.



COMPOSITES

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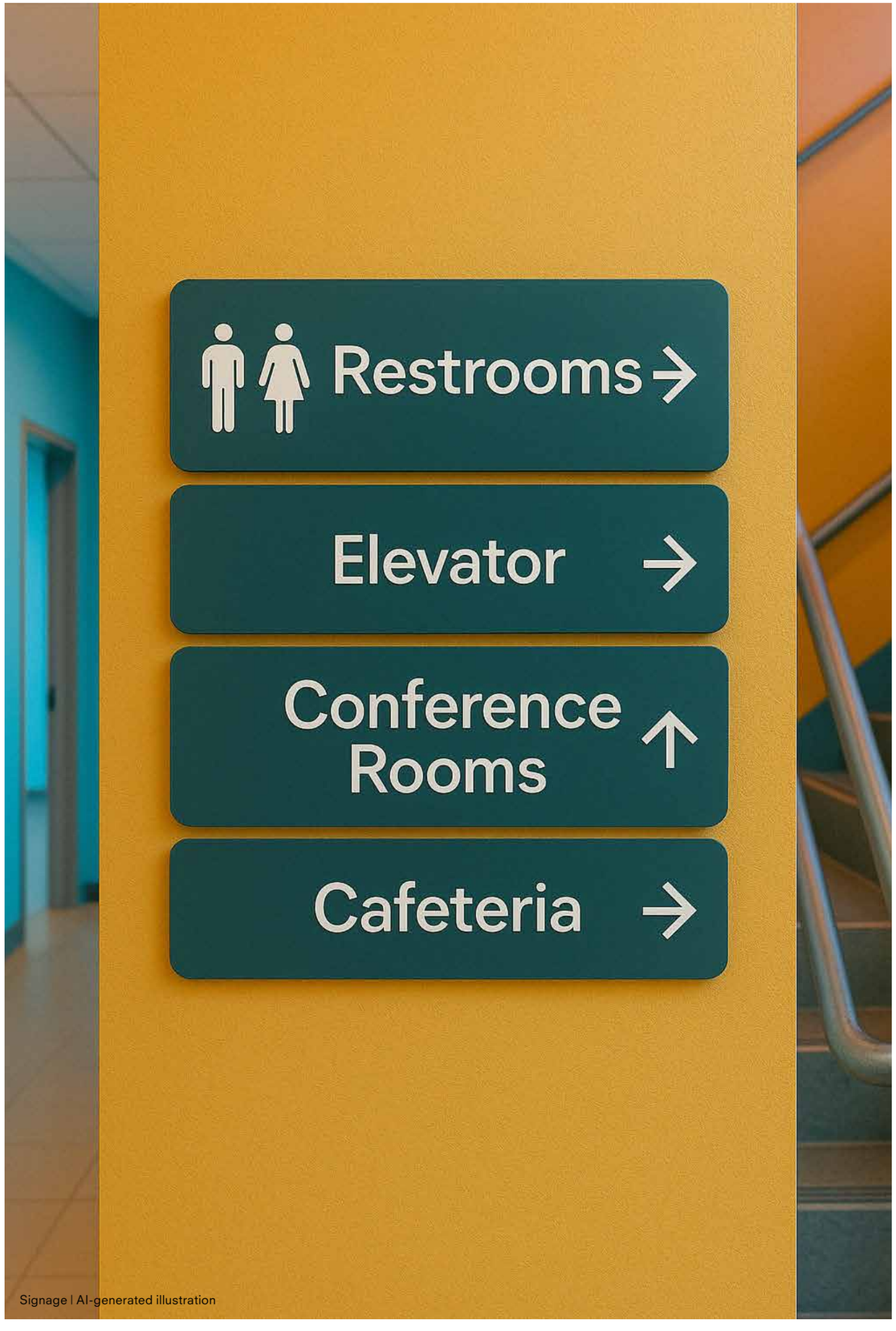


Signage | AI-generated illustration

SINTREX®

SINTREX® is a lightweight expanded rigid PET sheet suitable for versatile printing applications.

Based on a new and innovative 3A Composites manufacturing technology (patent pending) for large-format sheet materials, SINTREX® is a printing substrate which combines numerous benefits. It is the result of intensive research and development into innovative, pioneering materials.

SINTREX® sheets are made of PET (polyethylene terephthalate), one of the most versatile and promising plastics, already the material of choice in many applications from food packaging to structural foams. PET is noted for its excellent recyclability and well-established recycling options.

The unique, natural white surfaces of SINTREX® make it the ideal product for use in the printing industry. Processing is quick and easy and the printability for all conventional printing technologies is first-rate. The sheets, which feature particularly good weather resistance, are also suitable for outdoor use.

As SINTREX® sheets also have outstanding fire properties, hardly inflammable in accordance with EN 13501-1, they are suitable for a wide range of different applications, especially where special fire regulations are required. Public areas, in particular, often require more stringent preventive fire measures. For example, areas of application for signage and displays include airports, trade shows, shopping centres, public buildings and in shopfitting.

SINTREX® is available in two different thicknesses: 5 mm and 10 mm, and in widths of up to 2030 mm.

Sustainable involvement and environmental protection have always been amongst the essential corporate objectives at 3A Composites. The minimisation of risks for man and environment as well as the reduction of environmental pollution through careful and efficient utilisation of resources is part of the corporate philosophy.

Our production site in Sins, Switzerland, is certified in accordance with the ISO 14001 the standard, defining internationally recognised requirements for environmental management systems. In addition, we have already linked the management systems for quality (ISO 9001), health and safety (ISO 45001) and energy management (ISO 50001) at many production sites. The production site is also rated by EcoVadis. EcoVadis is a renowned, independent platform which assesses companies worldwide in the areas of environmental protection, labour and human rights, ethics and sustainable procurement.

The SINTREX® production site is involved in ongoing efforts to reduce CO_2 emissions by scaling back energy and water consumption, increasing productivity and avoiding waste. The plant has sourced 100% of its electricity from renewable energy sources since 2022.

SINTREX® sheets are subject to the highest quality standards and stringent monitoring during manufacture. Our top priority is to ensure that SINTREX® does not contain any hazardous substances. All SINTREX® sheets also comply with the requirements of the currently valid version of the REACH & RoHS directives.

Read more about our commitment to sustainability from page 8 onwards.

SINTREX® – THE INNOVATIVE SOLUTION FOR VERSATILE PRINTING APPLICATIONS.

SINTREX®

THE INNOVATIVE SOLUTION FOR VERSATILE PRINTING APPLICATIONS.

CHARACTERISTICS

- New and innovative printing substrate
- Lightweight expanded rigid PET sheets
- Available in thicknesses of 5 mm and 10 mm and in widths up to 2030 mm
- Unique, natural white surfaces
- Excellent printability using all conventional printing technologies
- Quick and easy to process
- Fire behaviour for the 5 mm version according to EN 13501-1: B-s1, d0; for the 10 mm version according to EN 13501-1: C-s1, d0
- Good weather resistance
- Good recyclability

APPLICATIONS

- Urban street furniture
- Equipment, appliances & machine construction
- Boat and shipbuilding
- Caravan construction
- Shopfitting | trade show stands | stage design | studio and office furnishings and fittings
- Interior design
- Advertising structures/ hoardings
- Lighting industry
- DIY

PROCESSING

- Printing – direct digital printing
- Printing – screen printing
- Lacquering | Painting | Spraying
- Lamination
- Cutting – waterjet
- Sawing | Cutting out
- Contour milling
- Folding (V-groove) | Cold bending
- Hot bending | Hot folding
- Hot forming | Thermoforming
- Gluing | Screwing | Drilling

Natural white

Advertising boards | AI-generated illustration

Advertising display | AI-generated illustration

Signage

Exhibition stand construction

GENERAL				
Sheet thickness (mm)			5 mm	10 mm
Apparent density (nominal)	ISO 1183	kg/m³	320	320
MECHANICAL				
Tensile strength	ISO 527-2	MPa	12	10
Modulus of elasticity	ISO 527-2	MPa	600	400
Flexural strength	ISO 178	MPa	18	16
Flexural modulus	ISO 178	MPa	700	500
Surface hardness	ISO 7619	Shore D	32	32
OPTICAL				
Colour			Natural white	
THERMAL				
Maximum service temperature (continuous use)	–	°C	65	65
Reaction to fire classification	EN 13501-1	–	B-s1, d0	C-s1, d0

For more details on the processing of SINTREX®, please contact our technical team.

Note: Technical data of our products are typical ones.
The actually measured values are subject to production variations.

SUSTAINABILITY

MISSION: TOGETHER. RESPONSIBLE.

We have summarised our commitment to sustainability in our corporate **MISSION: TOGETHER. RESPONSIBLE.** As we also apply and comply with this mission in regard to our products, we have created a classification system for them. The five categories in our **FIVE-DOT-MISSION** system indicate factors with a significant impact on sustainability. Our intention is to offer our partners guidance with their purchasing decision-making and to provide a transparent system. A system which focuses on the use of materials, the carbon footprint, the product life cycle and recycling, a topic of particular relevance for our products. Our FIVE-DOT-MISSION makes an assessment of a product on the basis of the five categories and awards points per category, the product is then assigned to one of the five coloured DOTs. By this means we achieve a transparent, quick valuation logic which we can also use to gauge product innovation and improvement at 3A Composites.

THE FIVE-DOT CATEGORIES ARE:

1. BIOBASED CONTENT

Depending on the product, different raw materials are used to manufacture our panels. In this case, we look at the percentage of renewable raw materials used in our products. Our aim is to increase the percentage whenever possible and appropriate.

2. RECYCLED CONTENT

The industry selects raw materials obtained by means of recycling processes which can be used in the manufacture of new products. At the same time, it is essential to ensure requirements such as fire ratings, processing, functionality and appearance are retained. We work continuously to extend our network of recycling companies and to increase the material recycling rates. This category is where we gauge the proportion of high quality recycled raw material in our products' total material input.

3. CO_2 FOOTPRINT

In this category we monitor the kg CO_2 eq/kg per product which is released into the environment during product manufacture (cradle-to-gate) according to EN 15804+A2 (A1-A3). Using the Helix calculation program from Ecochain Technologies B.V as well as the latest LCA datasets from Ecoinvent or similar databases, we measure the carbon footprint of our products in accordance with ISO 14040 und 14044 for the Life Cycle Analysis (LCA). Information regarding the carbon footprint of a specific product or a Life Cycle Assessment (LCA) document is available on request.

4. PRODUCT LIFE CYCLE

The plastic sheets and composite panels we produce are used by our customers for a longer period of time. In contrast to products used in the short term, these longer-term alternatives make an active contribution to saving resources. In this category we show our panels' average service life. Life cycles can range from approximately 1 year to more than 30 years depending on the different materials.

5. RECYCLABILITY

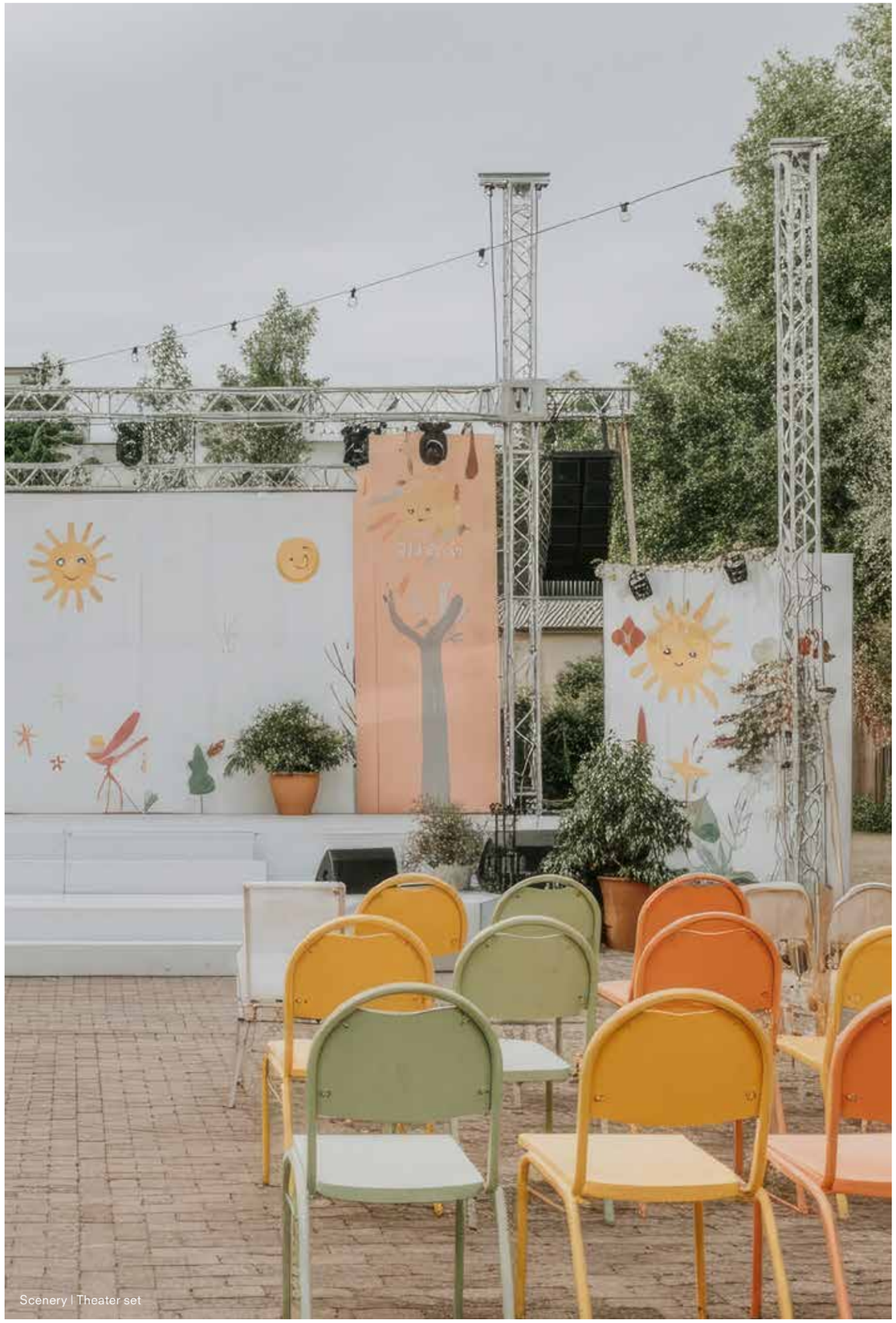
One of the most important aspects of sustainability is contributing to environmental protection by cutting down use of valuable raw materials, conserving resources and avoiding waste. Unlike the second category "recycled content", in this assessment category, we show options for recycling the panels after they have been in use. There are already, for instance, established recycling loops for various paper types and metals. At some production sites, the material can already be returned, so that material for new products can be created. As a company, we came to the conclusion that thermal recycling as a means of energy capture does not seem sustainable enough, so it is not included in our FIVE-DOT classification. Instead, we are actively working with partner companies to establish sustainable and future-oriented recycling solutions for closed-loop recycling management.

As many as 3 points can be achieved in each of the categories presented, totalling a maximum of 15 points. According to the total number of points achieved (1-15), the FIVE-DOT classification is conducted using the following colour gradation.

Transparency is important to us! We will review the product assessment annually to see in which areas the product can be improved. We have set ourselves the goal of achieving 80% of our sales with products which achieve a rating of ≥ 7 points in the FIVE-DOT classification by 2028.

Join us on our sustainable mission!

mission
TOGETHER. RESPONSIBLE.

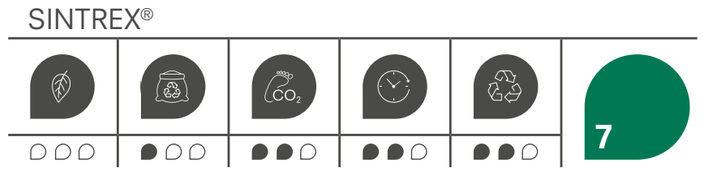


Scenery | Theater set

SUSTAINABILITY

SINTREX® FIVE-DOT-MISSION

SINTREX®, the innovative solution for versatile printing applications, has been assessed in line with the criteria described above. SINTREX® currently achieves a FIVE-DOT classification of 7 points in total.



RECYCLED CONTENT

We are already recovering and reusing our own production waste to create new material in the manufacture of our SINTREX® sheets. We aim to continue increasing the proportion of recycled content in the future.

CO_2 FOOTPRINT

SINTREX® sheets offer advantages in terms of weight and, at the same time, a high degree of stability due to their unique foamed structure. In addition, as fewer resources are required for production, the amount of CO_2 bound in the material is reduced.

PRODUCT LIFE CYCLE

Our SINTREX® sheets are made of polyethylene terephthalate (PET), a very durable thermoplastic, which means these very lightweight boards are suitable for use both indoors and outdoors. Some of the popular applications are for printing substrates, signage, displays and in trade show constructions.

RECYCLABILITY

Our SINTREX® is a mono-material PET sheet, which is characterised by its good recyclability. We are committed to processing our production waste within the company and using it again to manufacture new products.

PET is one of the most recyclable plastics; it can be repeatedly recycled without altering its basic material properties. By supporting recycling schemes and developing new technologies to recycle PET, this polymer can become one of the most sustainable resources in the plastics industry. A large proportion of PET, both virgin material and rPET, is used to manufacture packaging for foodstuffs, such as trays, containers and films, as well as to create polyester fibres for clothing and textiles. The plastic is inert and does not release any harmful substances into food or beverages.

Unfoiled waste from SINTREX® sheets can be used in structural foams for e.g. wind turbines or in yacht construction or in the packaging industry.