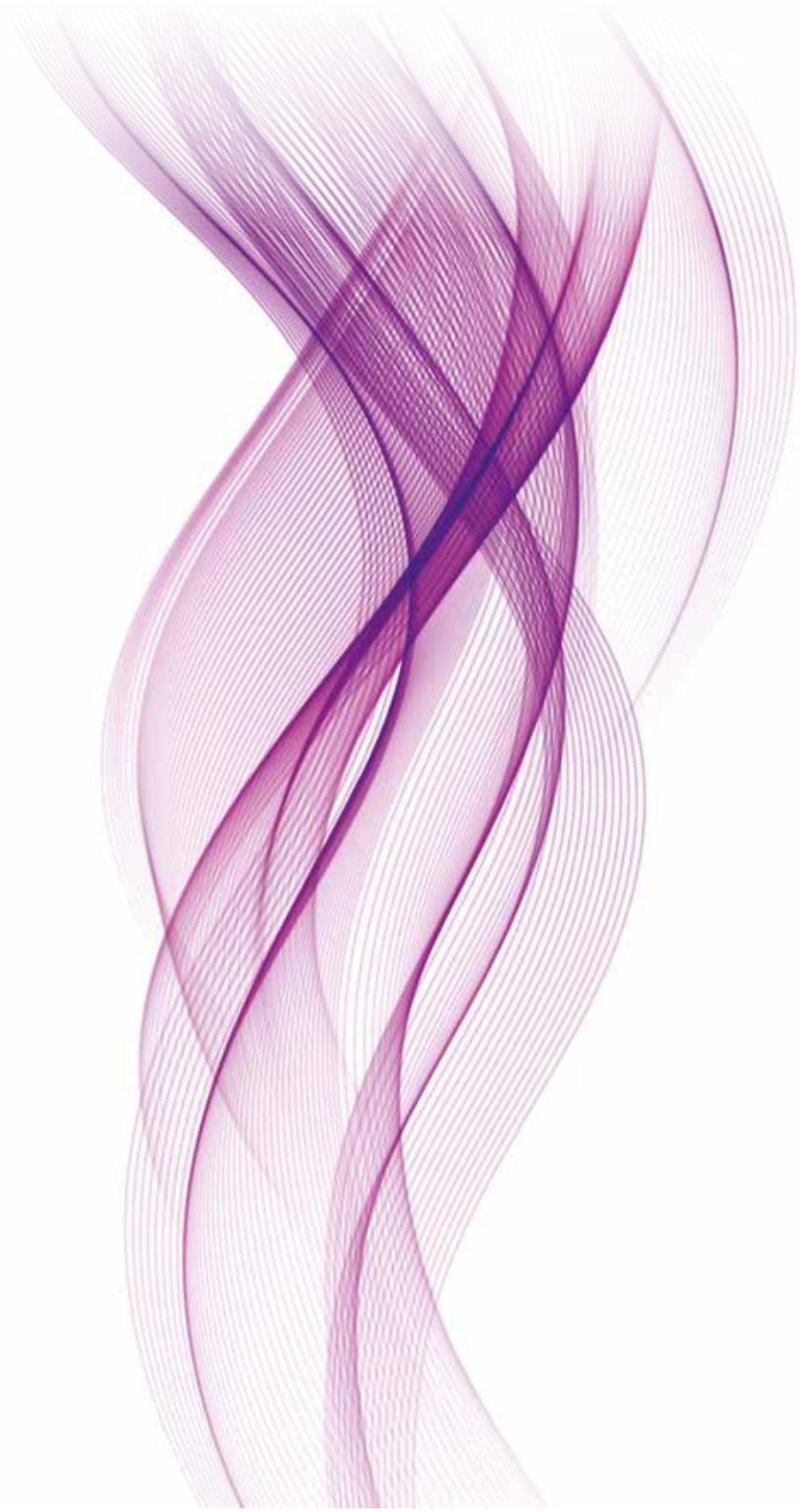
DILITE®

PRODUCT GUIDE

THE ECONOMIC COMPOSITE MATERIAL.



JA COMPOSITES

DILITE®

DILITE® is an economic aluminium composite panel based on the DIBOND® production concept. DILITE® comprises two 0.2 mm aluminium cover layers and a UV resistant polyethylene core. The aluminium composite panel offers consistently good quality at competitive prices.

DILITE® has an optimized coating for digital printing and can be perfectly applied for flat, short and medium term interior and exterior applications. In addition, the composite material is recyclable and available in a variety of colors, as well as in matt and gloss versions.

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 is certified according to DIN EN ISO 14001, which lays down globally recognized requirements for environmental management. In addition, management systems for Quality (DIN EN ISO 9001), Occupational Health and Safety (DIN ISO 45001) and Energy (DIN EN ISO 50001) constitute important corporate objectives.

At the DILITE® production site in Singen, there are permanent measures in place to reduce energy and water consumption, to increase productivity, to save waste and, as a result, to reduce CO_2 emissions significantly. The CO_2 has been successfully reduced by 46% and energy by 30% over the past ten years. In this same period, 60% less waste water and 14% less waste has been generated. Heat recovery measures were also implemented in 2021 and will lead to an additional CO_2 reduction of 450t annually. Further investment in this system is expected to save another 900t CO_2 by 2025.

DILITE® is a high quality product which goes through extensive quality controls during its production process. The abstention from hazardous processes and substances is one of our highest priorities. All lacquer formulars applied for DILITE® do not contain any heavy metals.

DILITE®

THE ECONOMIC COMPOSITE MATERIAL.

CHARACTERISTICS

- Economic aluminium composite panel
- UV resistant polyethylene core
- Optimized coating for digital printing
- Variety of colours in matt and gloss as well with a brushed surface (BUTLERFINISH®)
- Recyclable
- Variety of formats
- Protective film on both sides; BUTLERFINISH® only on front side

APPLICATIONS

- Perfectly for flat, short and medium term interior and exterior applications
- Photomounting
- Simple sign applications
- Simple hoardings
- For large format signage, shop fronts and complexe processing techniques (e.g. folding) we recommend DIBOND® with 0.3 mm aluminium cover layers

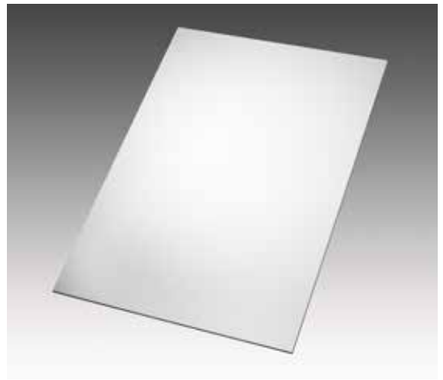
PROCESSING

- Digital printing | Screen printing
- Laminating
- Painting | Spray painting | Lacquering
- Contour milling
- Water jet cutting
- Shearing | Sawing | Punching
- Gluing
- Drilling | Riveting | Screwing
- Hot-air welding

STANDARD COLOURS

- White | Yellow | Red | Blue | Black | Aluminium-Metallic | BUTLERFINISH®
- Surface combinations: matt/matt, gloss/matt, gloss/gloss

Colours are non-identical with DIBOND® colours.



TECHNICAL DATA SHEET

THICKNESSES AND WEIGHT					
Panel thickness	mm	2	3	4	6
Thickness of aluminium layer	mm	0,2			
Weight	kg/m²	2,6	3,5	4,4	6,2
CORE					
Polyethylene, type LDPE	g/cm³	0,9			
SURFACE					
Polyurethane- lacquer system / polyester- lacquer system*					
THERMAL PROPERTIES					
Thermal expansion coefficient		2.4 mm/m at 100°C temperature difference			
Temperature resistance	°C	-50 up to +80			

*Due to the different lacquer systems colour variations between the front and back side are normal.

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

SUSTAINABILITY

MISSION: TOGETHER. RESPONSIBLE.

Sustainability is at the core of everything we do. Our corporate ecological commitment is summed up by the **MISSION: TOGETHER. RESPONSIBLE.** As we also apply and comply with this mission in regard to our products, we have created a classification system. The five different categories in our **FIVE-DOT-MISSION** system indicate the factors with the greatest 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 CO_2 content, the product life cycle and, of course, recycling, a topic of particular relevance for our products. Our FIVE-DOT-MISSION makes an assessment of a product on the basis of 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 recycled raw materials for use in the manufacture of new products which also fulfil requirements such as fire ratings, processing prerequisites and customer expectations in terms of functionality and appearance. This category is where we gauge the proportion of high quality recycled raw material in our products' total material input.

3. FOSSIL CO_2 BOUND IN THE MATERIAL

This category shows the weight of fossil CO_2 embedded in our panels. Differences here are principally due to the raw material type and origin, the density, the composition and the proportion of recycled content.

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. Material properties result in disparities, so life cycles range from <1 year to even >30 years.

5. RECYCLABILITY

One of the most important aspects of sustainability is contributing to environmental protection by saving valuable raw materials 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 paper and metals. At some production sites, the material can already be returned, so that material for new panels can be created from it. As a company, we came to the conclusion that thermal recycling 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 a closed-loop, sustainable and future-oriented recycling economy.

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 the majority of our sales with products which achieve a rating of ≥ 7 points in the FIVE-DOT classification by 2030.

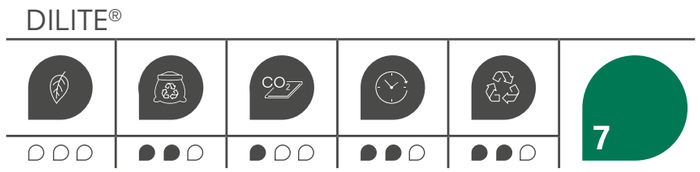
Join us on our sustainable mission!

mission™
TOGETHER. RESPONSIBLE.

SUSTAINABILITY

DILITE® FIVE-DOT-MISSION

DILITE®, the economic aluminium composite panel has been assessed in line with the criteria described above. The product currently achieves a FIVE-DOT classification with a total of 7 points.



RECYCLED CONTENT

In the core of our DILITE® panels we exclusively use recycled LDPE, and this means we are able to make an important contribution to closed-loop recycling. By using recycled core material, approximately 6,700 metric tons of LDPE virgin material can be saved every year. We work with selected European suppliers to source recycled LDPE of a consistently high quality. Continuous quality assurance is an essential part of this process for us. What is more, all DILITE® panels comply with the requirements in the current version of the REACH & RoHS directives. Not only is DILITE® core material recycled, the aluminium used in our aluminium cover sheets is also in part recycled. Aluminium is one of the materials best suited to recycling because regardless of how often it is recycled, there are no detrimental effects on its material properties. We intend to increase the proportion of recycled aluminium in our cover sheets in the future.

FOSSIL CO_2 BOUND IN THE MATERIAL

As the production of aluminium and the core material polyethylene are energy-intensive, there is embedded fossil carbon in DILITE®. Using recycled LDPE, has already significantly reduced the CO_2 footprint. Changing electricity generating methods for aluminium production is another means of reducing the amount of fossil carbon.

PRODUCT LIFE CYCLE

Our durable DILITE® panels are used for indoor and outdoor applications. In terms of weather resistance, the full range of selection criteria advocate the use of DILITE®. The panels are temperature resistant from -50°C to +80°C, waterproof and UV-resistant.

RECYCLABILITY

DILITE® is completely recyclable, i.e. both the core material and the aluminium cover sheets are recycled and used to produce new material. The material can be separated by cutting it into small pieces using, e.g. granulators or shredders, and then sorting it by type for reuse or recycling. There are standard practices and specialised recycling companies for this purpose. In addition, we are engaged in setting up regional networks with trading partners and recycling companies to create recycling systems for aluminium composite panels. We launched the first pilot project in Switzerland in 2021. We are also a member of the AlUIF e.V., an association, which specialises in establishing a recycling network consisting of as many environmental and collection partners as possible in Germany. This is intended to facilitate the return of aluminium composite panels to the material cycle via short transport routes.

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