

Technical specification – ACP Bond / Economy Bond

ACP Bond and Economy Bond boards are double-sided aluminium panels with a thickness of 2,3,4 mm, coated with a PE polyethylene core, produced by a continuous coextrusion process, with a PE varnish on both sides. The plates have a protective film on both sides.

The manufacturer declares that the products listed below have been inspected and tested by the manufacturer according to the test methods specified in the technical data sheets and that they fully comply with the technical characteristics declared in the available technical data.

ACP Bond, Economy Bond products are manufactured in accordance with ISO9001:2015. These panels have been inspected according to Czech standards by protocol AO212/PC5/2017/0009/Z.

Length of warranty for manufacturing defects:

Economy Bond with PE core, PE paint - 2 years

Use: Underlayment material for economy applications where the emphasis is not on colour fastness over time

ACP Bond with PE core, PE paint - 2 years

Use: Material for advertising applications where the emphasis is not on colour fastness over time.

ACP Bond / Economy bond is not suitable for use on facade panels such as building cladding etc.

If used for other purposes than directly stated above, the material will void the warranty provided by the manufacturer/supplier.

For this application we recommend to give ACP Bond panels with FR or A2 core (depending on the specification of the particular building) and PVDF coating.

Warranty for ACP Bond, Economy Bond and DeBond is voided under the following conditions:

- 1) The panels are not installed correctly;
- 2) The panels are damaged or scratched;
- 3) Panels are exposed to unusual environments such as intense smoke, abrasive products, radioactive environments, exposure to chemicals or air charged with chemical particles, or other aggressive environments
- 4) The panels are installed in an area where sandstorms occur;
- 5) The panels have long-term contact with water;
- 6) The panels are exposed to salty or alkaline environment;
- 7) Panels are not properly cleaned and improperly maintained.

Introduction

ACP Bond and Economy Bond are lightweight, rigid and durable composite panels for a variety of applications, consisting of two sides of painted aluminium and a black polyethylene (LDPE) core. The layers are fixed by chemical and mechanical processes, giving the material resistance to delamination. The aluminium surfaces are coated with polyester paint.

The panels offer very good surface flatness and rigidity.

Thanks to its excellent weight to durability ratio, the panel is recommended as the most efficient technical solution for outdoor applications, as a versatile material, easy to process, with very little processing losses.

Application

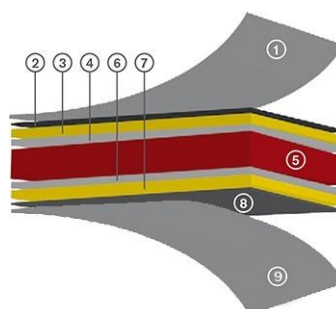
- Digital printing, screen printing
- Boxes, totems, light volumetric POS display letters
- Exhibition stands
- Advertising panels
- Etc.

Aluminium composite panel offers:

1. Excellent weight to stiffness ratio
2. Dimensional stability, low coefficients of expansion
3. Excellent quality
4. Ease of processing
5. Variable dimensions, with the largest dimension being up to 2x6 metres
5. Wide range of colours (up to 24 different colours in stock)
6. Possibility to combine panels with aluminium profiles as required

Cut of ACP Panel:

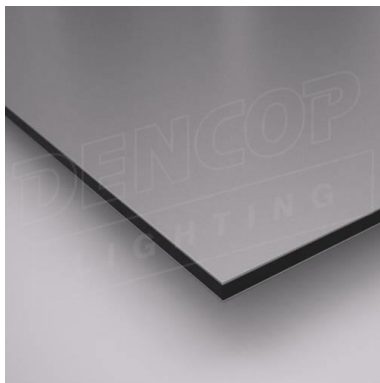
1. Protection foil
2. Coloured film (PE)
3. Aluminium plate
4. Adhesive bridge
5. PE core
6. Adhesive bridge
7. Aluminium plate
8. Coloured film (PE)
9. Protection foil



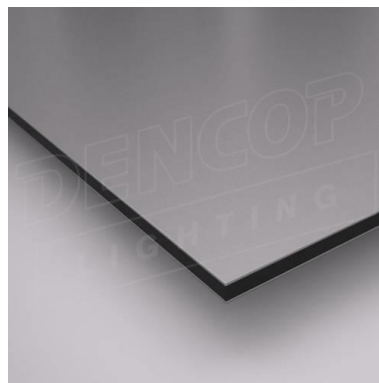
Stock colors:



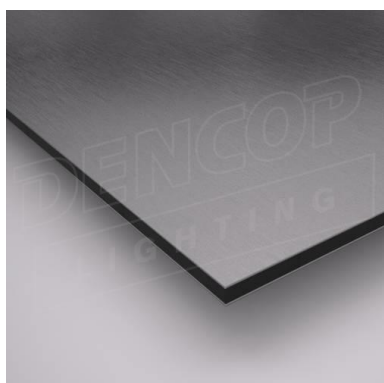
White RAL 9003



Silver RAL 9006



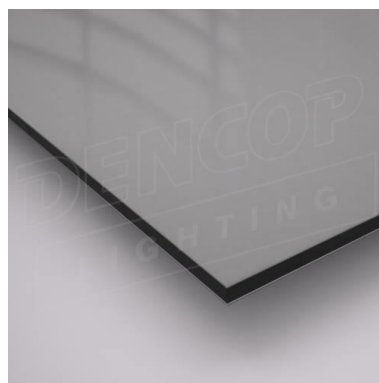
Silver RAL 9007



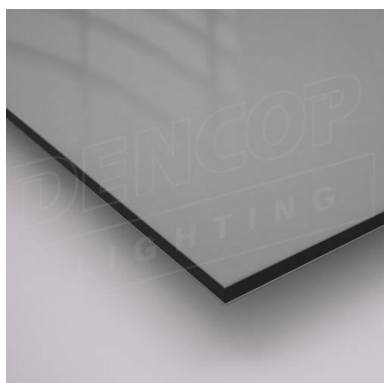
Silver brush



Silver brush



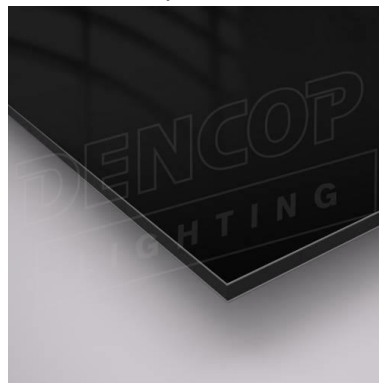
Grey 7012



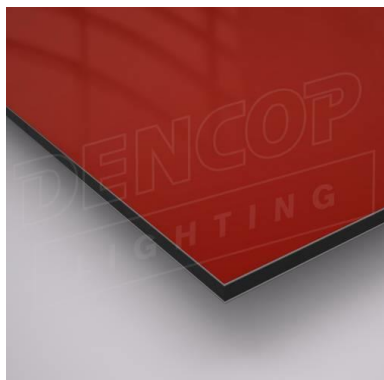
Grey RAL 7035



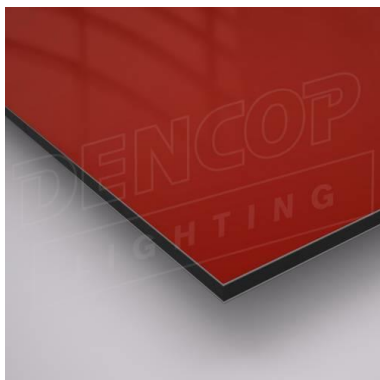
Black RAL 9005



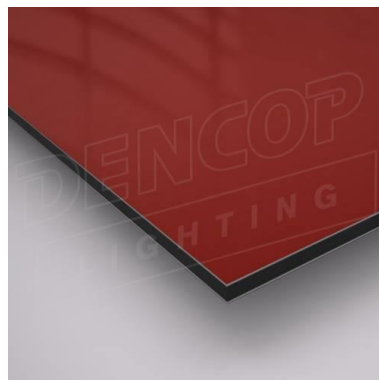
Black-gloss 9005



Red RAL3020



Red-gloss RAL3020



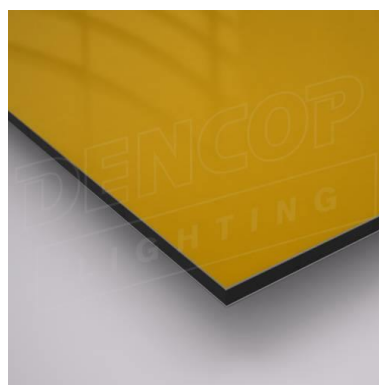
Red RAL 3000



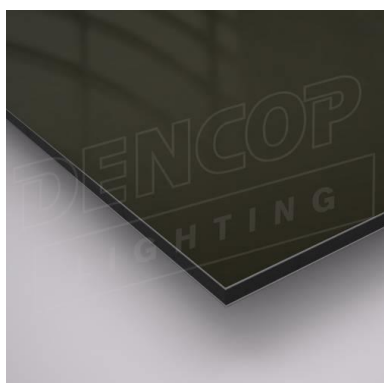
Orange RAL 2004



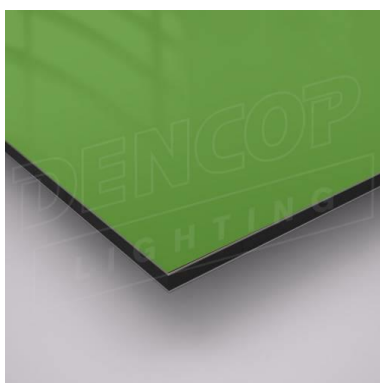
Yellow RAL 1021



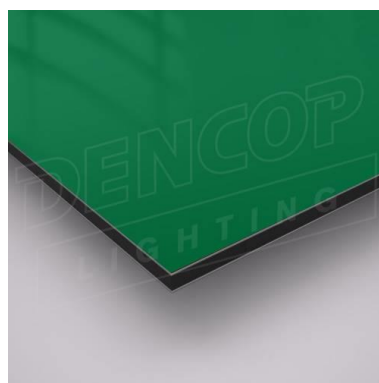
Yellow RAL 1003



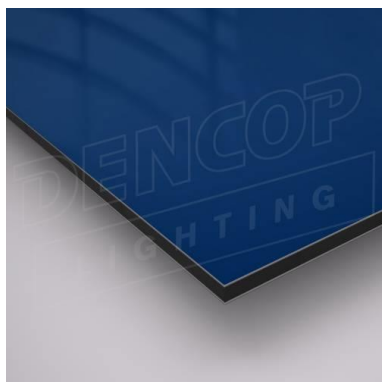
Dark green RAL 6007



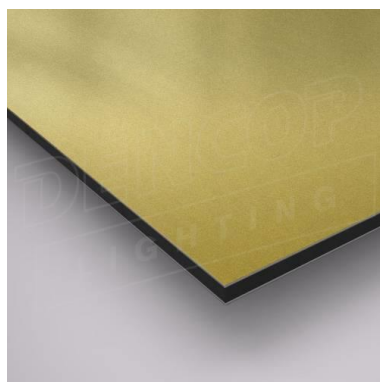
Green RAL 6018



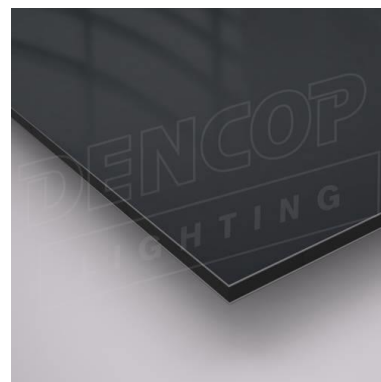
Green RAL 6029



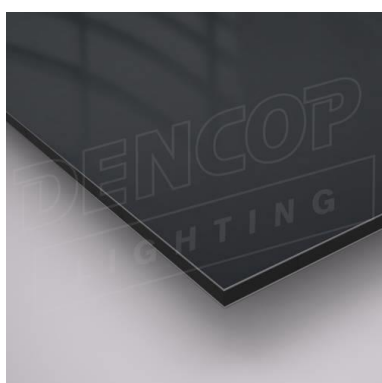
Blue RAL 5002



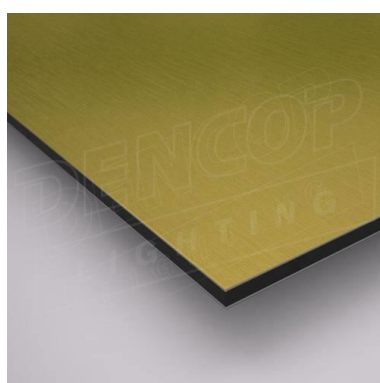
Gold RAL 1036



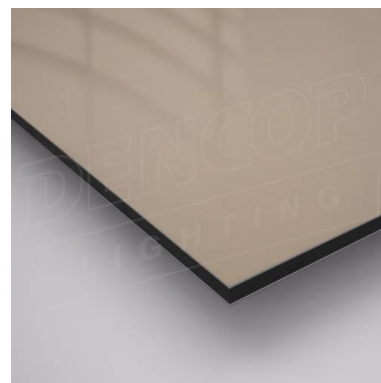
Grey RAL 7012



Grey RAL 7016



Gold brush



Ivory RAL 1015

Colors other than standard colors are available on request.

Notice:

There may be color differences between the RAL codes and the actual color of the composite aluminum sheets! For the application it is necessary to follow the assembly instructions, especially to follow the placement of the panels so that the arrows displayed on the foil are connected to each other (facing the same direction).

ACP Bond and Debond can be painted from the factory:

- on both sides according to RAL colors (both sides are protected by protective foil)
- on one side according to RAL colors (only the painted side is protected by a protective foil). The other (unpainted) side is provided with a protective coating, commonly referred to as a primer.

Product differences:

Each product has certain characteristics and characteristics that may vary slightly from batch to batch. Exceptionally, however, within a single batch. It is recommended that these properties are considered when designing the project.

Solid colors:

Color variations may occur from plate to plate or from batch to batch for solid colors. Clear colors such as red, yellow, blue, etc. may have greater color variation compared to paler shades. Also, these shades lose pigment the fastest.

It is always recommended to purchase the required boards for the project in the form of a single order (one batch) in order to maximize color uniformity.

Protective foil

ACP Bond, Economy Bond and DeBond are covered with a special film that provides protection during transportation, storage and processing. Although this film has UV protection, exposure to temperature fluctuations and strong sunlight can make it more difficult to remove the film. Therefore, it is not recommended to leave the film on the panel for a long time.

The foil must be removed immediately after the installation of the material or within 30 calendar days after installation.

Large temperature changes and direct exposure to the sun can reduce the lifespan of the protective film and make it difficult to remove the film. After a longer time, protective foil can imprint into the paint surface.

It is not recommended to label the protective film, use solvents or plasticizers that may damage the panel. It is not recommended to remove the protective film at temperatures below 10 ° C.

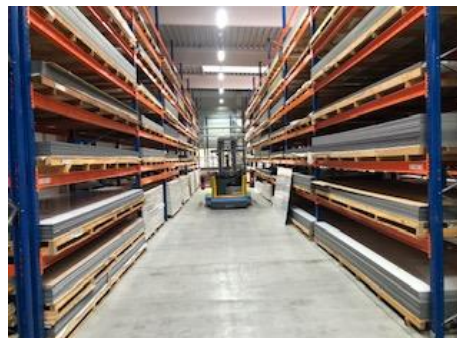
Storage

Store the composite panels horizontally on pallets to prevent bending without any major dust or direct sunlight.

Place the pallets on top of each other, maximum 4 pallets of the same size, the pallets with a higher weight must be on the bottom.

Do not stack boards of different sizes on top of each other; there is a risk that the surfaces of large boards will be scratched by the corners of small boards;

Store pallets in places away from humidity and rain at a temperature of at least 15 ° C; Avoid any condensation (e.g. when moving cold boards to warmer rooms).



ACP storage in Dencop

Manipulation

Composite panels should be handled with care, especially large panels. Individual panels should lift two or more people, lift all four sides at the same time and not pull them. Panel has limited bending point, after exceeding this bending point, panel cannot be reverted into original state.

Installation

There are arrows on the protective film indicating the direction of the panel painting. It is important to follow this direction during installation to avoid shading differences between adjacent panels, especially in metallic, brushed colors or special effects.

It is not recommended to use panels from different lots on the same wall to avoid possible differences in color. We recommend that you purchase the required boards for your project in a single order to ensure closest color uniformity.

Maintenance

Maintenance of composite panels is recommended only with neutral detergents dissolved in water. The use of solvents, thinners, acids or other products which may physically or chemically affect the integrity of the materials from which they are made is prohibited. These solutions or detergents may cause discoloration. Do not clean heated surfaces (above 40 ° C) as drying too fast may also cause damage.

Technical parameters

Standard aluminum thickness: 0.12 mm; 0.15 mm; 0.18 mm; 0.21 mm; 0.3 mm; 0.5 mm

Standard panel thickness: 2 mm; 3 mm; 4 mm

Standard panel width: 1220 mm; 1500 mm; 2000 mm

Standard panel lengths: 1000 mm; 3050 mm; 4050 mm; 5000 mm; 6000 mm

| Parameter | Tested panel | Norm / Test | Filled norm |
|---------------------------|---------------|------------------------------------|--|
| Panel thickness | 3 mm, PE core | CSN 73 0122-5 / STO-17-0009/Z | 3,00 +- 0,005mm ; |
| Panel thickness | 4 mm, PE core | CSN 73 0122-5 / STO-17-0009/Z | 4,00 +-0,10mm |
| Impact resistance | 3 mm, PE core | CSN EN 477 / STO-17-0009/Z | Violation does not occur at impact \geq 20 J/m |
| Impact resistance | 4 mm, PE core | CSN EN 477 / STO-17-0009/Z | Violation does not occur at impact \geq 60 J/m |
| Bending stiffness | 3 mm, PE core | CSN EN 310 / STO-17-0009/Z | EI \geq 55 Nm ² /m |
| Bending stiffness | 4 mm, PE core | CSN EN 310 / STO-17-0009/Z | EI \geq 150 Nm ² /m |
| Yield strength in bending | 3 mm, PE core | CSN EN 310 / STO-17-0009/Z | M _{0,02} \geq 95 Nm/m |
| Yield strength in bending | 4 mm, PE core | CSN EN 310 / STO-17-0009/Z | M _{0,02} \geq 235 Nm/m |
| Flexural strength | 3 mm, PE core | CSN EN 310 / STO-17-0009/Z | M _{0,m} \geq 130 Nm/m |
| Flexural strength | 4 mm, PE core | CSN EN 310 / STO-17-0009/Z | M _{0,m} \geq 320 Nm/m |
| Fire reaction class | 3 mm, PE core | CSN EN ISO 11925-2 / STO-17-0009/Z | Class E |
| Fire reaction class | 4 mm, PE core | CSN EN ISO 11925-2 / STO-17-0009/Z | Class E |

The information contained in this datasheet is correct and true to the best of Dencop's knowledge at the time it was issued.

Consultation is recommended before any use of the material to ensure that the product is suitable for the application.

This document is the property of Dencop and may not be passed on to third parties without the knowledge of the author.