

CLEANROOM COMPONENTS & ACCESSORIES - PANELS

Of all the materials used in a cleanroom, the largest surface area is covered by wall and ceiling systems. It is therefore more than obvious that the right choice of system, and in particular the finishing applied here, is also determined by the material properties of the cladding to ensure the required conditions and optimum performance.

A diversity of specifications such as materialization and product-dependent properties offers endless applications and possibilities as wall and ceiling cladding in many cleanroom segments. Handling complex projects related to cleanrooms requires time and expert knowledge. The wide variety of paneling products makes finding the right solutions difficult. Understanding manufacturing processes helps us develop and manufacture customer-specific, economical and efficient solutions. Cleanroom Building & Construction Systems supplies a very extensive range of cleanroom-compatible panels directly from stock and also offers many prefabricated machining options that reduce initial assembly costs

HPL (High Pressure Laminate)

This cladding is composed of tritiated eucalyptus wood fibers and thermosetting resin, which is assembled as a core board under high temperature and pressure to then be finished, also under high temperature and pressure, 2-sided with a melamine resin impregnated decorative paper. Thanks to its ultra-high density and physical properties, this type of board, with its most stringent waterproof, fungicidal and antibacterial specifications, meets almost all the requirements for use in conditioned environments.

specifications ⁽¹⁾

dimension	1220x2440mm (4 and 6mm) / 1220x3050mm (6 and 10mm) / 1830x3050mm (10mm)
weight	approx. 1,40 kg/m ² /mm
density	≥1350 kg/m ³ according to EN 438-7
classification	ISO-1 tot ISO-8 according to ISO 14644-1
fire resistance	B-s1, d0 according to EN 13501 (E2 optional)
outgassing	TVOC (C6-C16) 0.025mg/m ³ according to TÜVRheinland report No. 244540466b 001 formaldehyde Grade E1 according to EN 13986
strength	flexural strength >100 N/mm ² / bending elastance >10.000 N/mm ² according to EN 178 break resistance Class-5 according to EN 438-2
thermal	conductivity U 0.23 W/m ² K according to EN 438-2
resistance	fungus: Class-1 / bacterial: ≥99% according to JIS Z-2801
operations	sawing, milling, laser cutting, drilling, digital printing

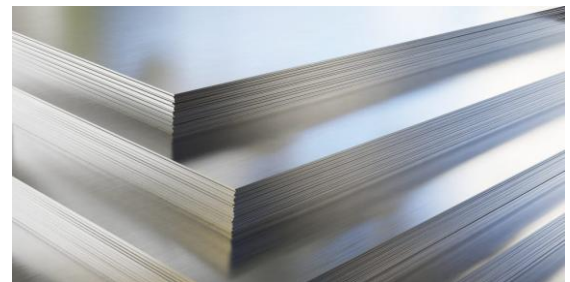


ACM (Aluminum Composite Material)

Composite cladding is a durable 3-layer lightweight sandwich panel consisting of 2 decoratively coated aluminum layers (coils) bonded to a polyethylene (PE) core for stability and durability. For cleanroom applications, ACM cladding is excellent where good stability, lightweight and aesthetically appealing appearance are required. In addition to a very wide range of colors and coatings, the panels can be easily machined: sawing, drilling, milling, edging and printing.

specifications ⁽¹⁾

dimension	1220x2440mm / 1250x3050mm / 1250x4050mm (4 and 6mm) tolerances according to DIN 16927 / ISO 11833-1 and -2 4mm: 5.6 kg/m ² / 6mm: 7.9 kg/m ²
weight	4mm: 5.6 kg/m ² / 6mm: 7.9 kg/m ²
density	≥1315 kg/m ³
classification	ISO-1 up to ISO-8 according to ISO 14644-1
strength	flexural strength R _m ≥145 N/mm ² (aluminum) according to EN 485-2 bending elastance 70.000 N/mm ² according to EN 1999 1-1
thermal	resistance R 0.0172 m ² K/W according to DIN 52612 conductivity U 5.34 W/m ² K according to DIN 4108
acoustic	transmission loss R _w 26dB according to ISO 717-1
coating	3-layer polyester XT 18~21 µm
operations	sawing, milling, laser cutting, drilling, digital printing

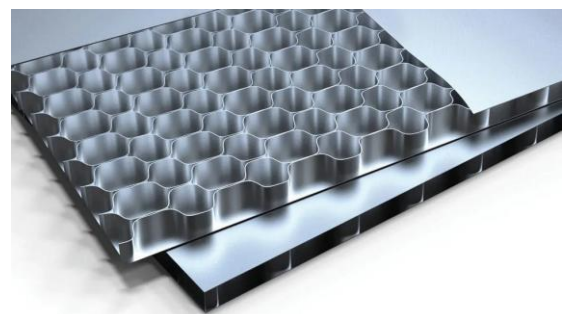


HONEYCOMB

Honeycomb panels are 2-sided laminated sandwich panels with a honeycomb core such as aluminum, thermoplastics or foam core and which are characterized by special properties and advantages: rigidity, lightweight, high impact resistance, excellent resistance to atmospheric and chemical agents, thermal and acoustic insulation as well as excellent recyclability. The panels are fire-retardant (Grade A2) and a safe choice due to no risk of flame drops or toxic gas emissions.

specifications ⁽¹⁾

dimension	1220x2440/3050/3660mm - 1250x2440/3050/3660mm 1500x2440/3050/3660mm thickness: 6, 10, 15, 20 and 25mm
weight	4,7 kg/m ² (6mm) ~ 7,3kg/m ² (25mm)
classification	ISO-1 up to ISO-8 according to ISO 14644-1
fire resistance	class A2
strength	stiffness 7100 kNcm ² /m ¹ (6mm) ~ 221600 kNcm ² /m ¹ (25mm) bending strength R _m 125 N/mm ² (6, 10mm) / 220 N/mm ² (15, 20, 25mm) bending elastance 68.650 N/mm ²
thermal	conductivity U 0.95 W/m ² K (6mm) ~ 2.70 W/m ² K (6mm) expansion coefficient 2.4mm/m ¹ at ΔT=100
coating	Polyester (PE), HDPE, FEVE and PVDF (20~50 µm)
operations	sawing, milling, laser cutting, drilling, edge-bending, digital printing



SKIN-FOAM PVC

Characterized by its smooth surface and almost unlimited applications, this integral foam panel made of skin-foam PVC has a particularly uniform inner cell structure. Thanks to its distinctive properties such as lightweight, stability and impact resistance, sound and heat insulation, colorfast, moisture and weather resistant, non-swelling, good chemical resistance and recyclability, this panel type finds its way into many challenging applications requiring a high degree of cleanliness.

specifications ⁽¹⁾

dimension	1000x2000/2500/3000/4000mm - 1250x2000/2500/3000/4000mm 1500x3000/4000mm - 2000x3000/4000mm thickness: 8, 10, 13, 15, 17, 19, 24 and 30mm
weight	8~24mm: <0,5kg/m ² /mm – 30mm: <0,55kg/m ² /mm
density	430~550 kg/m ³ according to DIN EN ISO 1183
classification	ISO-1 up to ISO-8 according to ISO 14644-1
fire resistance	M1 according to NFP 92-512 and Class E according to DIN EN 13501-1 B-s3, d0 / B-s3, d2 according to DIN EN 13501-1 (optional)
strength	bending strength R _m 3,5 N/mm ² (8~17mm) according to DIN 53421
thermal	conduction 0.049~0.067 W/(mK) according to DIN 52612 conductivity U 1.6 (30mm) ~ 3.0 (8mm) W/m ² K according to DIN 52612
acoustic	sound insulation value 26~32 dB according to DIN ISO 717-1
operations	sawing, milling, laser cutting, drilling, screwing, welding, gluing, bending, laminating, digital printing

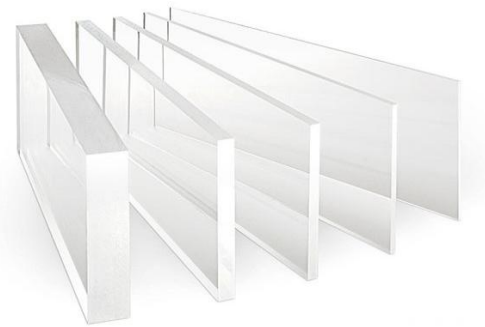


ACRYLATE

Acrylic plates also known as PMMA (polymethylmethacrylate), Acrylic glass, Perspex and Plexiglas® is a transparent amorphous polymer which, because of specific and advantageous properties compared to glass, can be excellently applied in clean rooms where a higher (impact) strength, lower weight, good machining possibilities and/or better formability are desirable. Available in cast (GS) or extruded (XT) quality in various clear and translucent versions, optionally available with antistatic coating (ESD).

specifications ⁽¹⁾

dimension	2050x3050mm thickness: 2 ~ 10mm (XT quality)
weight	4mm: 4,76kg/m ² /mm and 6mm: 7,14kg/m ² /mm
density	1190 kg/m ³ according to DIN EN ISO 1183
classification	ISO-1 tot ISO-8 according to ISO 14644-1
fire resistance	Class 3 E according to DIN EN 13501-1 BS 476 part 6 + 7 B2 according to DIN 4102
strength	bending strength R _m 105 N/mm ² according to EN 178 break point 4.5% according to ISO 527-2/1B/5
optical	translucent 92% according to DIN 5036-3
thermal	conduction 0.19 W/(mK) according to DIN 52612 conductivity U 5.6 (3mm) ~ 4.4 (10mm) W/m ² K according to DIN 4701 expansion coefficient 0.07mm/m ¹ °C according to DIN 53752-A
acoustic	sound insulation value 26 dB (4mm) ~ 32 dB (10mm)
operations	sawing, milling, drilling, lasering, gluing, bending, lettering, digital printing



⁽¹⁾ comprehensive and product-specific data sheets available on request

Building on reliability

Cleanroom Building & Construction Systems is a strong international and independent supplier of a wide range of constructive floor, wall and ceiling systems to specialized partners active in the cleanroom industry. For companies and organizations that want to build on confidence. Trust in our knowledge and the specific properties of our products and systems: efficient, economical, durable and constructive. Trust in a powerful partner you can always rely on.

From production process analysis to final implementation of the cleanroom environment, Cleanroom-BCS is your reliable supplier of cleanroom related building and construction systems. Handling complex cleanroom projects requires time and expert knowledge, and the wide variety of products often makes finding the right solutions difficult. Understanding processes helps us to develop and manufacture customer-specific, economical and efficient solutions. With our selected and competent partners, we are specialized in supporting projects and strive to provide efficient and economical solutions, advise customers holistically and deliver sustainable and responsible systems.

Cleanroom Building & Construction Systems, in cooperation with its qualified partners, is happy to perform these tasks for you. From order entry to delivery and installation or validation, you have only one point of contact with complete cost transparency.

We look forward to helping you to fulfill your system requirements. Visit our 'Clean-Experience-Centre' and learn more about our extensive system range and components to stay one step ahead of your competition.

Let's Build it Clean Together !

If you have a specific cleanroom cladding question, or would like more information on any of our quality cleanroom systems, please contact us at Info@Cleanroom-BCS.com or visit our website at www.Cleanroom-BCS.com.