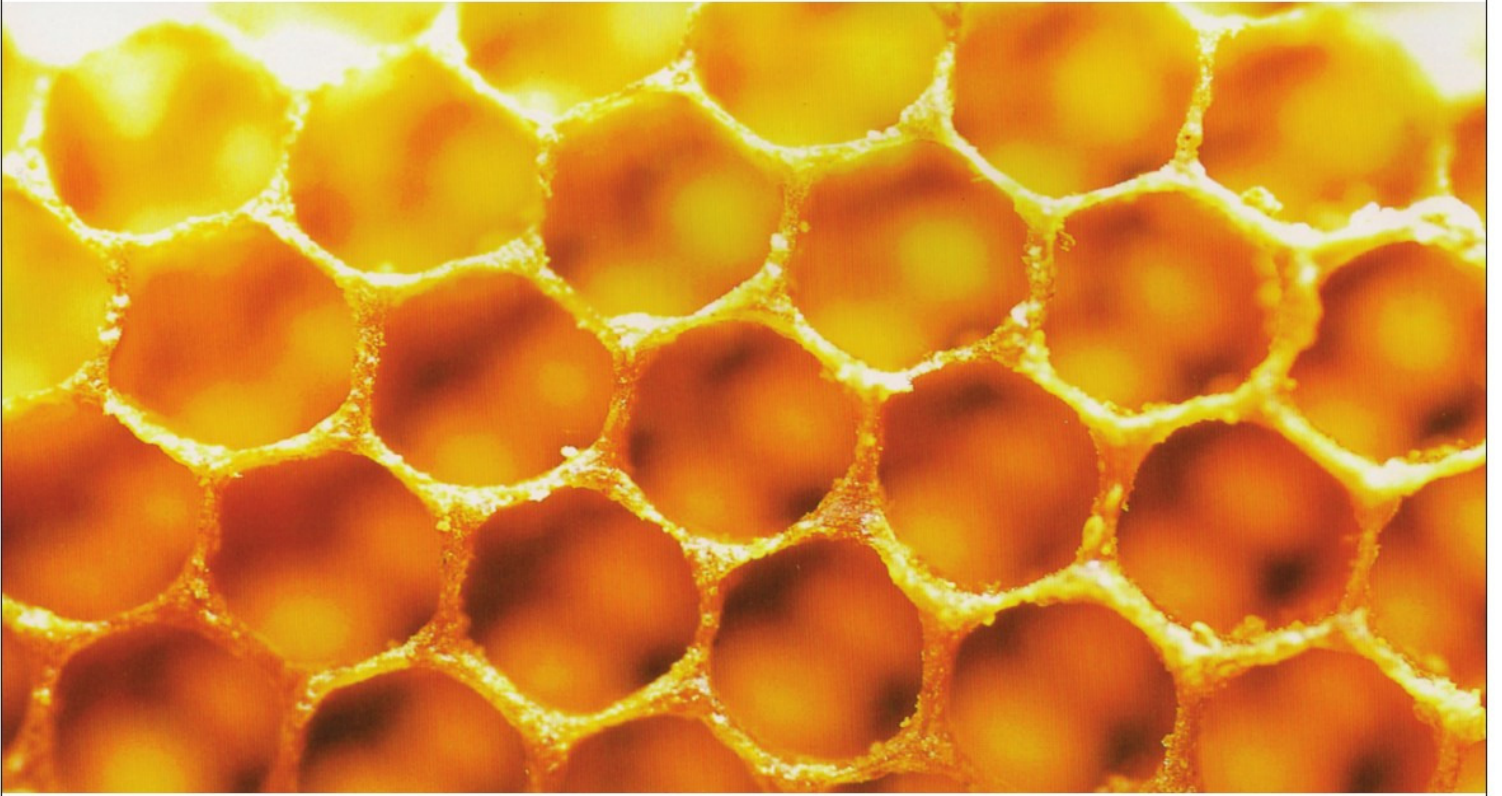
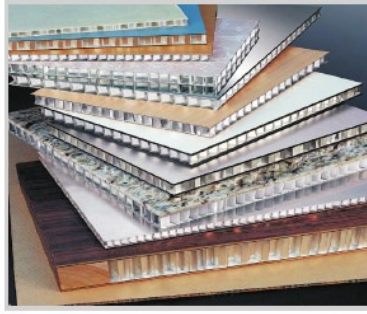


HONOLITE™

Aluminum Honeycomb Panel







ABOUT US

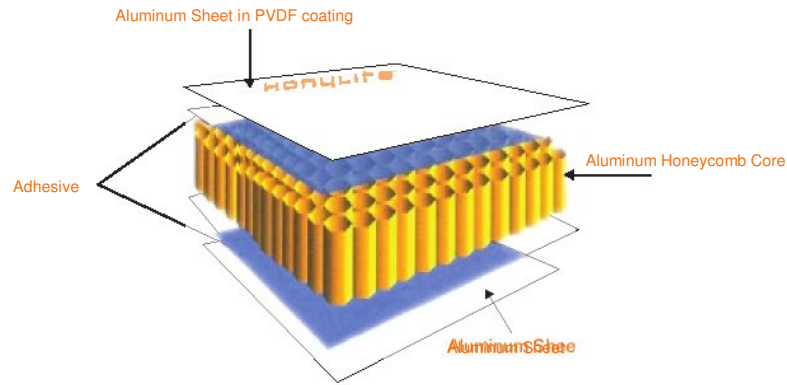
Universal Metaltek is one of the biggest Indian companies established for manufacturing, trading, imports and exports of various types of engineering items having a wide portfolio of lifestyle building material and engineering solutions. Our business networking is strong enough to cater all the customer needs anywhere in the world. Universal Metaltek has recently launched a new brand HONYLITE™ honeycomb panel.

We have a high energy level and strong ambition providing you with the best product price to performance ratio. This is accompanied with world class standards that can fulfill customer's explicit and implicit needs with true professional commitment. All our products have the best quality and conform to International Quality Standards.

We are associated with the world renowned manufacturers who are market leaders across the globe, to ensure that our customers get best quality solutions right at their doorstep. These products are backed by the strong support of technical teams of our associate manufacturers.

Universal Metaltek is a highly professional organization and managed by experienced technical and managerial personnel. This is supported by a strong foundation of honesty, reliability and dedication to excellence, which makes it the ideal choice for architects. Our main objective is to provide excellent services at right cost within the schedule time for our customer's satisfaction.





HONYLITE™ HONEYCOMB PANEL >>

The surface of the HONYLITE™ aluminum honeycomb panels are made of aluminum alloy plates roller coated with PVDF while in the middle are the aluminum honeycombs which meets the international aeronautical standards. This product is specially made with the cold-glue and hot-press technology.

The structural honeycomb core provides strength and consistent rigidity at a very low density; when bonded to similarly lightweight facings. Every honeycomb cell wall acts like the web of an I-Beam, forming an extremely strong and rigid lightweight composite panel.

HONYLITE™ honeycomb panel is an aluminum sandwich-type panel with high rigidity and extremely low weight. It is the ideal material for a most of applications in architecture, transport, display or industrial production.

APPLICATION OF HONEYCOMB >>

Architecture

HONYLITE™ honeycomb panel is a decorative material with excellent properties and is therefore ideal for innovative and artistic ceiling and wall claddings.

The combination of mechanical properties such as tensile strength of the cover sheets, outstanding aesthetic features is being highly appreciated by designers, architects and planners.

Clean, easily fabricated with perfect details, a great variety of applications is possible with the use of ordinary tools. It is also becoming increasingly popular in interior design.

Transport

The transportation industry is continuously searching for methods to increase efficiency and HONYLITE™ honeycomb panels not only decrease fuel consumption, but they can also increase payload capacity. Their high strength to weight ratio make them an excellent alternative to more traditional materials.

HONYLITE™ honeycomb panels can be used for all types of body panels, floors, supports, ceilings, and partition walls in trains, trailers, and trucks. It not only reduces the overall weight, but also provides better insulation and sound proof qualities.

Industry

HONYLITE™ honeycomb panel provides an enormous variety of industrial applications. Lightweight containers, machine tool cabin, wind tunnels, platform lifts and elevators, etc...

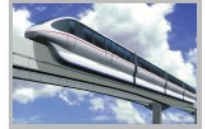
We provide back-up service for our valued customers by providing samples and detailed technical information. Our ultimate goal is to achieve customer satisfaction through quality and value.

Display

HONYLITE™ aluminum honeycomb panels offer a lightweight structural backing for graphics, signage, or other decorative material. They are used extensively in the construction of point of purchase displays and trade show exhibits due to their excellent durability and light weight. The panels are also very structurally sound and meet most ratings for fire control.

Cleanrooms

HONYLITE™ aluminum honeycomb panels tend to be the most popular wall panels chosen for microelectronics cleanrooms because of they are non-outgassing, non-particle shedding, and anti-static as well as lightweight and non-combustible.



FEATURES OF HONEYCOMB >>

Excellent Strength

The unique Honeycomb structure features many interconnecting shapes creating a very strong panel, resistant to adverse weather conditions and other pressures.

Light Weight

Unlike other composite panels featuring a solid core, the Honeycomb structure in our panel dramatically reduces the weight of the finished product.

Fire Retardent

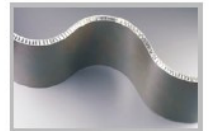
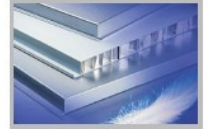
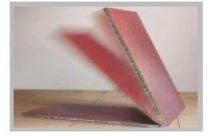
HONYLITE™ honeycomb panel is made solely of aluminum and can therefore prevent fire spreading and increase the safety index.

Insulating And Sound Proof

The Honeycomb structure absorbs sound well and can be used in sound damping and sound proofing applications. The structure will also act as an insulating material.

Exceptionally Flat Surface

The aluminum surface panel is supported by the unique Honeycomb vertical cell structure therefore producing an exceptionally flat panel, available in various colours.





TECHNICAL PROPERTIES

THICKNESS		4mm	5mm	6mm	10mm	15mm	20mm	25mm	
Moment of Inertia	I [cm ⁴ /m]	0.77	0.92	1.01	3.13	10.78	19.85	31.67	
Section Modulus	W [cm ³ /m]	1.27	1.98	2.63	4.63	14.00	19.00	24.00	
Rigidity	$E \cdot I$ [kNcm ² /m]	6,850	7,000	7,100	21,900	75,500	139,000	221,700	
Alloy / Temper of Cover Sheets		A3003 H18 / A3000 H16 / A5052 H34							
Tensile Strength of Cover Sheets	[N/ mm] ²	Rm \geq 125				Rm \geq 220			
Proof Stress	[N/ mm] ²	Rp 0.2 \geq 80				Rp 0.2 \geq 130			
Elongation	[%]	A50 \geq 5%				A50 \geq 10%			
Modulus of Elasticity	[N/ mm] ²	7,000 kg / mm ²							
Linear Thermal Expansion		2.4mm/m at 100 C ^o temperature difference							
Temperature Resistance		Approximately -40 C ^o to +80 C ^o							
Sound Absorption Factor	α	0.05							
Airbone Sound Insulation Index	Rw [dB]	21	21	21	21	22	23	25	
Thermal Conductivity	λ [W/m]	0.73	0.85	0.95	1.35	1.78	2.25	2.70	
Thermal Resistance	R(1/°)[m ² K/W]	0.0050	0.0051	0.0063	0.0074	0.0084	0.0089	0.0093	
Heat Transition Coefficient	U(k) [W/m ² K]	5.88	5.73	5.67	5.64	5.605	5.59	5.575	

HONEYCOMB CORE'S PROPERTIES

CELL SIZE (D)		6mm	9mm	12mm	19mm	25mm
Density	[Kg/m ³]	80	54	38	30	20
Compressive Bare Strength	[Kg/mm] ²	0.47	0.26	0.14	0.09	0.05
Crush Strength	[Kg/mm ²]	0.19	0.08	0.05	0.03	0.02
Bonding Strength	[Kg/mm] ²	36	28	26	21	19
Compressive Stabilized Strength	[Kg/mm ²]	0.50	0.27	0.15	0.09	0.06
Compressive Stabilized Modulus	[Kg/mm] ²	111	67	31	18	12

Product Range

Honeycomb panel is available in various standard thicknesses of 4, 5, 6, 10, 15, 20 and 25mm (maximum thickness goes up to 100mm) and is supplied at standard widths of 1220mm or 1500mm and maximum length go up to 6000mm. The production of special sizes is possible.

Colors 30 standard colors / customized colors / special colors

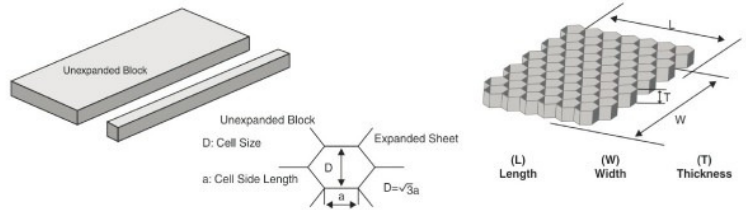
Coating IPE (Polyester) I (Fluorocarbon)PVDF

Aluminum Sheet / Aluminum Alloy






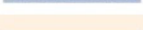


Available thickness: 0.50mm, 0.70mm, 1.00mm.

Standard Aluminum Alloy : A3003

Other Alloys / Custom Made / Special Sizes are available (subject to minimum order quantity)



PRODUCT DATA

	Type	Thickness	Thickness of Alu front sheet	Thickness of Alu back Sheet	Weight	Rigidity E-I	Section Modulus W
	HONYLITE™04	4.0mm	0.7mm	0.7mm	4.4kg/m ²	0.69kNm ² /m	1.27cm ³ /m
	HONYLITE™05	5.0mm	0.7mm	0.7mm	4.5kg/m ²	0.70kNm ² /m	1.98cm ³ /m
	HONYLITE™06	6.0mm	0.7mm	0.7mm	5.0kg/m ²	1.71kNm ² /m	2.6cm ³ /m
	HONYLITE™10 LIGHT	10.0mm	1.0mm	0.5mm	5.5kg/m ²	1.73kNm ² /m	4.7cm ³ /m
	HONYLITE™10	10.0mm	1.0mm	0.7mm	6.0kg/m ²	2.19kNm ² /m	4.6cm ³ /m
	HONYLITE™15	15.0mm	1.0mm	1.0mm	6.9kg/m ²	7.55kNm ² /m	14.0cm ³ /m
	HONYLITE™20	20.0mm	1.0mm	1.0mm	7.5kg/m ²	13.90kNm ² /m	19.0cm ³ /m
	HONYLITE™25	25.0mm	1.0mm	1.0mm	7.9kg/m ²	22.17kNm ² /m	24.0cm ³ /m

Facade or Curtain
Wall Cladding

Interior Decoration

Ceilings

Furniture Materials
Tabletop/Kitchen/
Washing Top/Doors

Elevators

Partitioning

Commercial Vehicles/ Trucks

Boat Hulls and
Boat Decoration

Railway Floors/
Doors/Interiors/
Fairing Panels

Aircraft Doors
and Hatches

Floor Panels

Racing Car Chassis

Cleanrooms



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