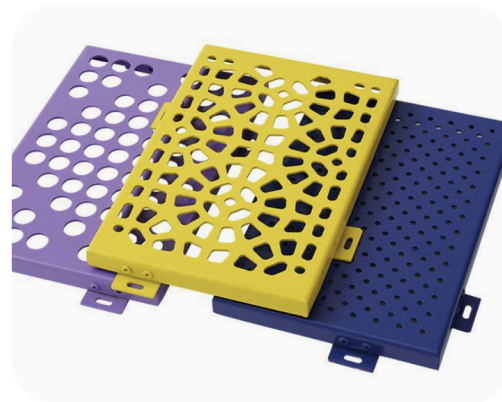


Perforated aluminum single panel ceiling



Perforated aluminum single-panel ceiling is a modular ceiling material made of aluminum alloy plates as the base material through CNC punching, bending and spraying, which combines decorative, functional and structural strength.

Appearance features	Customizable round holes, square holes, irregular holes, gradient holes, pattern holes, etc., with flexible arrangement and strong modern feel.
Core functions	Sound absorption and noise reduction, ventilation and heat dissipation, light transmission and air permeability, capable of concealing top pipelines and equipment.
Installation structure	Commonly used types include hook type, close-fitting type, and snap-on type, combined with light steel/aluminum alloy keel, which is convenient for disassembly and assembly and has high flatness.
Applicable scenarios	Office building lobbies, airports, high-speed railway stations, exhibition halls, meeting rooms, shopping malls, hospitals and other public spaces.



The starry sky ceiling is an artistic starry sky effect ceiling achieved on the basis of perforated aluminum single plates, combined with fiber optic light sources or LED backlights, it belongs to high-end custom ceilings.

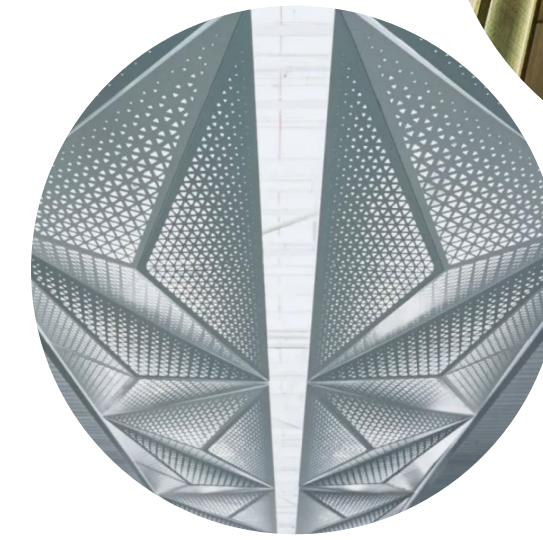
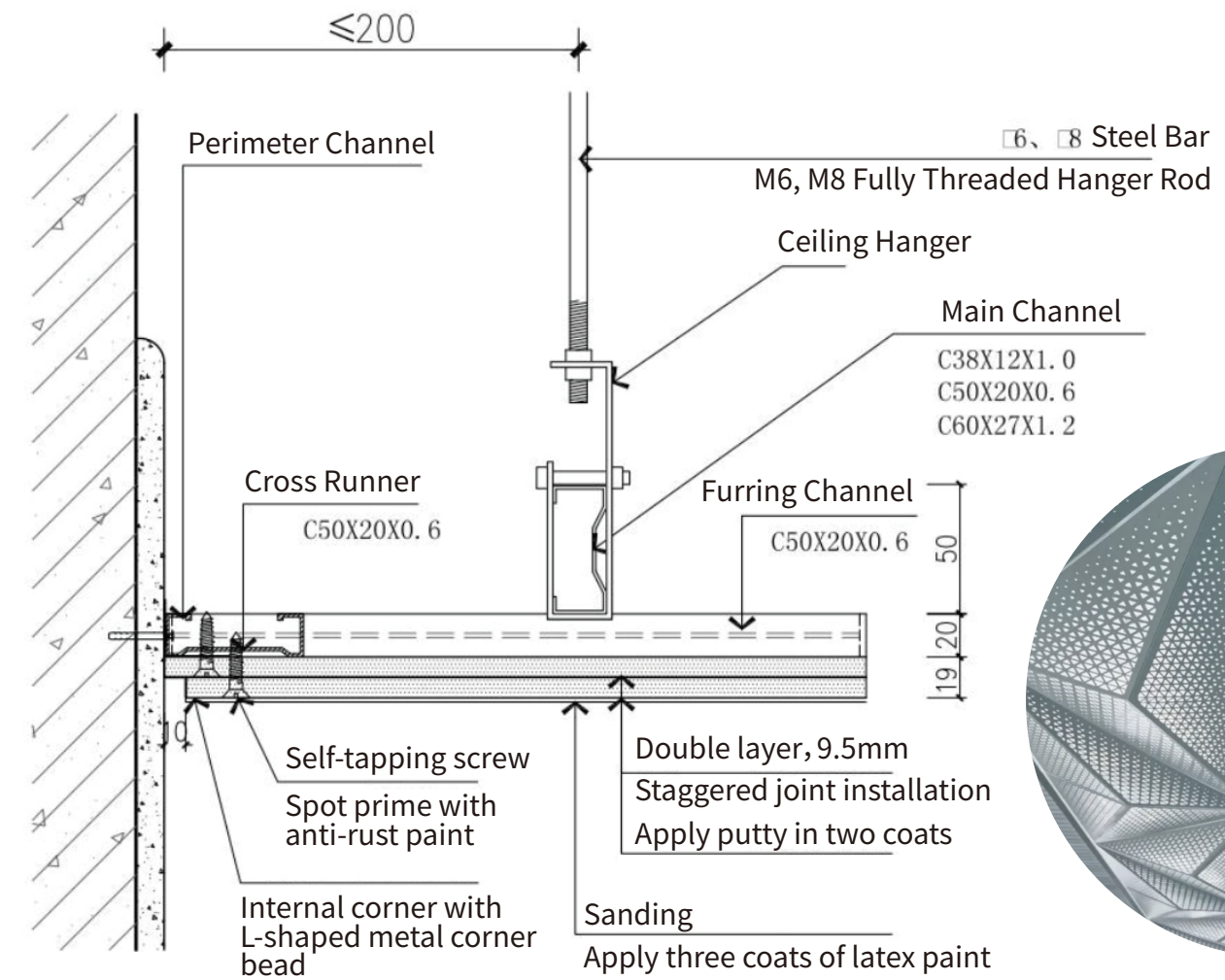
Implementation Method



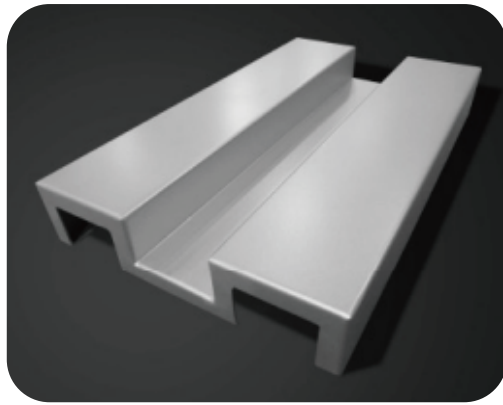
1. fiber optic starry sky ceiling: fiber optic filaments pass through the micro-holes of the aluminum plate, and when combined with a light source machine, it can achieve constant illumination, color change, and meteor flashing effects.
2. LED backlit starry sky ceiling: Light boxes and diffusion plates are set on the back of the aluminum plate. Light penetrates through the perforations, creating a uniform and soft starry sky light and shadow effect.

Visua effect	When the lights are off it features a simple metallic, ceiling, after the ights are turned on. it creates a dreamy and serene atmosphere dotted with stars.
Material advantages	Aluminum plates are fireproof, moisture-proof, do not deform, are easy to clean, and are more durable than traditional gypsum starry sky ceilings.
Applicable scenarios	High-end garages, hotel lobbies, clubs, home theaters, sales offices, bedrooms in luxury homes, cinemas, etc.

Perforated aluminum single panel ceiling

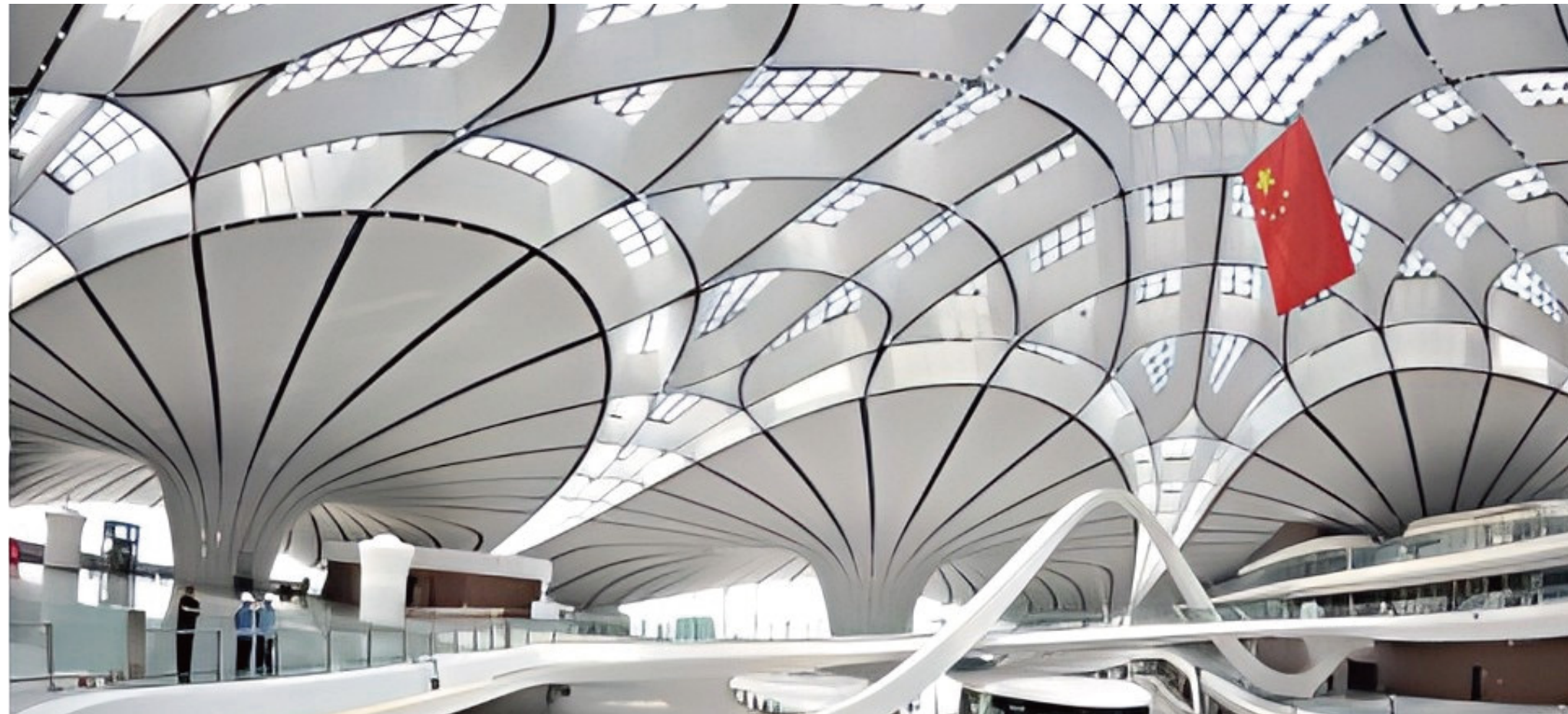


Special-shaped Ceiling Panels/Systems

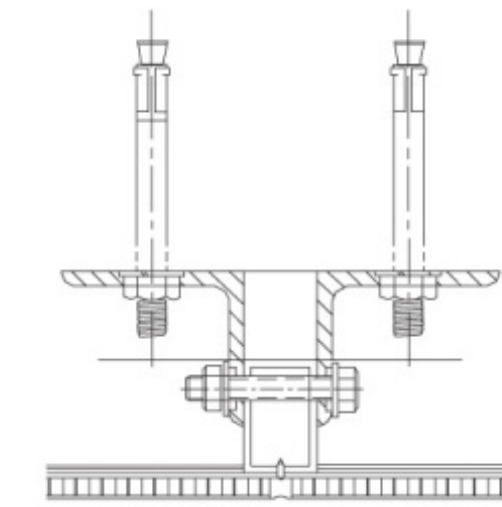


Abnormal shape ceiling products is not a standard mold, the product does not have a standard form after forming geometry, usually shears, bending machines, bending machines and other equipment to panel are processed into curved plates, knuckle plates, trapezoidal plates and other forms of shaped products. Non-standard ceiling panel ceiling system exceeded the standard form of the conventional concept, design unique and innovative, imaginative style, can meet the special purpose of building site design needs. Whether used where the product simple and the atmosphere block surface, changing the shape of a rich, brilliant colors and texture

are brought Shuoshuo brilliance of every designer and owner to achieve the desired sense of pride and a unique style of architecture characteristics. Shaped board ceiling system is based on customer needs and special custom shaped products, used in the design and functionality of some of the special needs of the construction sector.



Aluminum honeycomb large panel ceiling



Aluminum Honeycomb panel structure

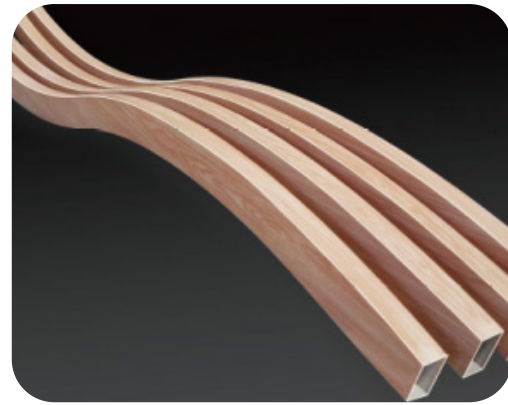
Light weight of materials: Aluminum honeycomb panel adopts sandwich structure, which consists of panel, honeycomb core and bottom plate. The weight per unit area is lighter than that of decorative plates such as glass, stone and single-layer aluminum plates, which greatly reduces the sefload of the outer wall for buildings and enables honeycomb panels to be safely applied to the decoraion of various parts of high-rise buildings.

High strength and rigidity: in the midle of aluminum honeycomb plate is a special hexagonal honeycomb aluminum fol, which is made of high-hardness aluminum mateial and is mainly used as a composte core plate adhered in a sandwich structure. it bears pressure in the tangential direction, because there are mandense honeycomb containing each other,just like many small beams, it can bear pressure from al direclions, This unique honeycomb structure not only reduces the overal proportion of the plates, but also increases its rigidity expo nentially with the increase of the over-all thickness of the plates.

Good surface flatness: Hexagonal honeycomb aluminum fol in the middle of aluminum honeycomb plate is avable in a variety of thicknesses and is arranged layer by layer, and then special cutting and miling machines are used to process honeycomb products of various height specifications. When in use, only the processed honeycomb needs to be unfolded to the required length.Since the area of the hexagonal honeycomb afer expansion is much larger than the overlapping area of the honeycomb before expansion, the honeycomb board as a whole has excellent mechanical properties and excellent fatness.



Square tubes, grilles, and Great Wall-shaped ceilings



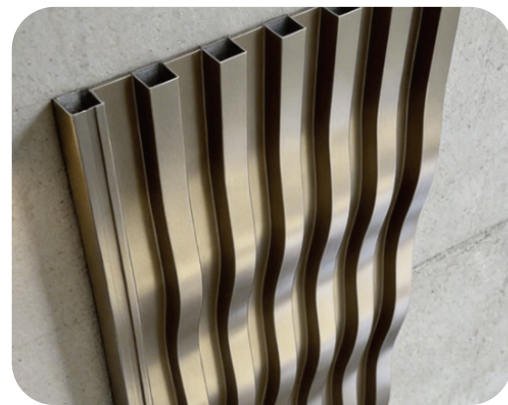
A decorative ceiling, adjustable vision height, and can conceal all pipe and other facilities, and also can be make sunlight or lamplight soft uniform. It has open vision, ventilation, breathable, lively and tidy line, distinct, reflected contracted modern style, simple and convenient operation, become main products in popular decoration market.

SIZE

Standard Bottom Width	20-80mm
Height Range	20-300mm
Extra-wide Bottom Width	100-300mm

APPLICATION

Place: senior office buildings, airports, club, banks, shopping malls, exhibition hall, and other places which need to fire and moisture-proof.



The profile square pass is formed by continuous extrusion, and the installation structure is a special keel snap-in structure. The installation method is simple and convenient, and is suitable for indoor decoration.

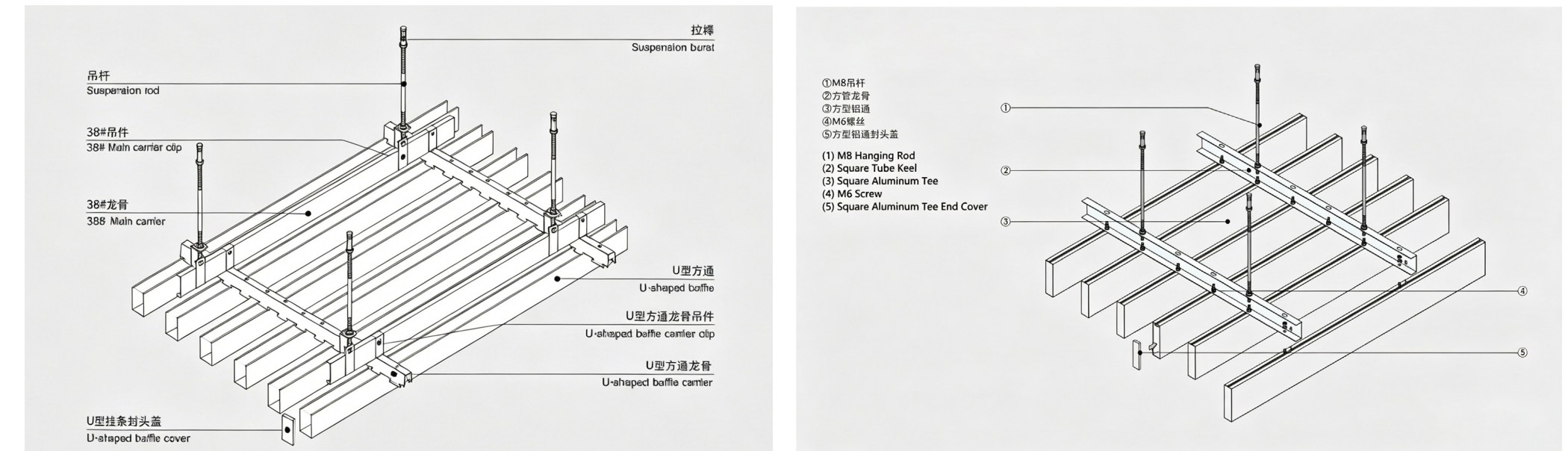
The product has the function of opening and decorating, and has the advanced effect of modern fashion. Through the changes of panel height, direction, lighting and color, the suspended ceiling will be more transparent and dynamic.

APPLICATION

Widely used in corridor, bars, shopping malls, office buildings, library club, square, exhibition, subway station, airport and other places.



Square tubes, grilles, and Great Wall-shaped ceilings node diagram



Installation diagram



Aluminum honeycomb panel Main Technical Parameters of Sheet Metal Processing

Project	Size Range	Allowable Deviation
Length, width	≤2000mm	±1.0mm
	>2000mm	±1.5mm
Thickness of aluminum honeycomb panel	-	±0.5mm
Folding height	-	±0.5mm
Diagonal difference	Length of aluminum honeycomb panel ≤2000mm	±2.0mm
	Length of aluminum honeycomb panel >2000mm	±3.0mm
Folding angle	-	≤1°
Plane flatness	-	≤0.5mm/1000m

NOTE: The above parameters are applicable to aluminum honeycomb panels with rectangular or square shapes. Some requirements can be implemented according to other shapes.

When the aluminum honeycomb panel has a curved surface, the maximum clearance between the curved surface and the standard template agreed by supply and requisitioning parties shall be ≤ 2mm.

Physical and Chemical Properties of Fluorocarbon Coatings

Test Project	AAMA 2605 Specification (98)	Allowable Deviation	Remarks
Glossiness (60°)	Low Specification: Minimum 19, Medium: 20-79, High Specification: Minimum 80	25-35	ASTM D523 60 Degree Gloss Meter
Hardness	Ainimur F	H	ASTM D3363 (Turquoise seagull pencil)
Adhesion	No Peeling off (100y100)	100/100	Cutting interval imm / Wet or Dry Film
Boiling Water Resistance	No Peeling off (100/100)	100/100	Cutting interval 1mm / 99-100°C x 20 min
Impact Resistance	No drop	No drop	Diameter 16 mm, Gardner impact test abrasion
Wear Resistance	Loss coefficient (V/T) 40Min	65Min	ASTM D968
Acid Resistance	No bubble, no change	No bubble, no change	Drop test at 18-27°C for 15 minutes (10% hydrochloric acid)
Mortar Resistance	Paint film has no loss, no change	Paint film has no loss, no change	24 hours pat test
Nitric Acid Resistance	Maximum chromatic aberration: 5-E	3-E	70% nitric acid for 30 minutes
Cleaning Resistance	No bubble, no change	No bubble, no change	Glass detergent
Glass Cleaning Resistance	No bubble, no change	No bubble, no change	3% detergent
Moisture Resistance	Rust Maximum No.8	No bubble	38°C x 72 hours
Salt-spray Resistance	corosion Max. 1/32"	1/32"	ASTM D 2247
Weather Resistance	Maximum chromatic aberration: 5-E Exposure Lowest 50% (60°)	3-E 80%	ASTM B117
Aging Resistance	Maximum Aging Rate No.8 (Color other than white), Maximum No.6 (White)	Other colors: No 8 White: Mo 6	(5% saline, 100°F, 4000 HRS)
Corosion resistance	Maximum Loss 10%	5%	10 Years of 45°C Sun Exposure Experiment in South Florida, USA

Composition (%) and Mechanical Properties of AA3003 H24 Series Alloy

Mn	Cu	Mg	Fe	Si	Zn	Ti	Al	Impurity	
								Single	Total
1.0-1.6	≤0.2	≤0.05	≤0.7	≤0.6	≤0.1	≤0.15	Balance	≤0.05	≤0.1
Specific gravity		Expansion coefficient		Melting point		Elastic coefficient		Therm ductivity	
2.73g/m ³		21(-108)°C		680°C		71GPa		203.5W/M°C	
Mechanical Properties									
Tensile Strength MPa				Elongation%				State	
140-180				≥5				H24	

NOTE: At room temperature, the main phase composition is Cu(Al, n, Al₆). Possible impurity phases are (Fe, Mn)Al₆ or (Fe, Mn, Si)Al₆, etc.