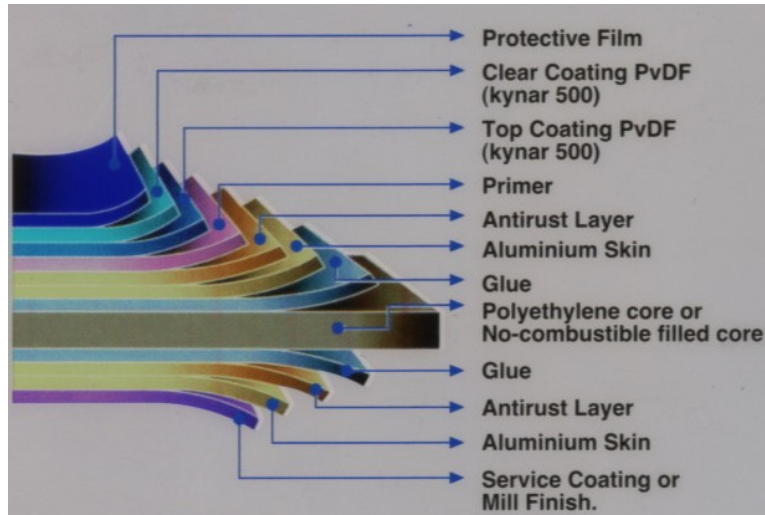


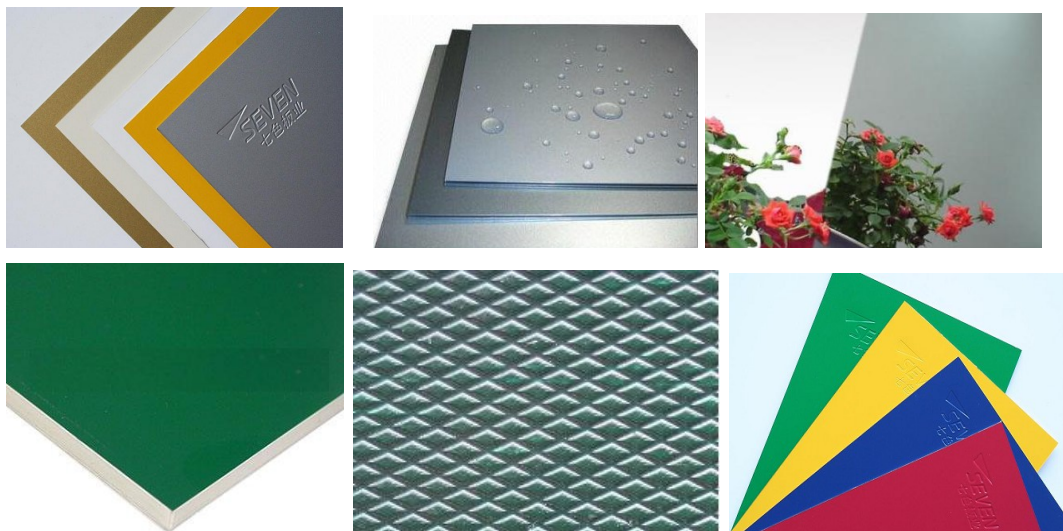
Aluminum composite panel

Structure:



Line-up:

- 1 SEVEN PVDF Aluminum composite panel
- 2 SEVEN PE Aluminum composite panel
- 3 SEVEN FR Aluminum composite panel
- 4 SEVEN Granite /Wood coating composite panel
- 5 SEVEN Brushed aluminum composite panel
- 6 SEVEN Mirror finish aluminum composite panel
- 7 SEVEN Color Glossy aluminum composite panel composite panel
- 8 SEVEN Chameleon composite panel
- 9 SEVEN Nano PVDF aluminum



Dimensions and Tolerances:

1. panel thickness: 2-3mm(mostly interior), 4mm, 5mm, 6mm
2. panel size: Standard Width 1220, 1250mm
Special Width less than 1220mm or more than 1250mm
(special Width available subject to minimum quantity)
Length max to 10000mm (recommended max 6000mm)
3. Coil thickness: 0.08-0.6mm(+/-0.02mm)
4. product tolerance:
Width: +/-2.0mm
Length: +/-3.0mm
Thickness: +/-0.2mm
Bow: Maximum 0.5% of the length and/or width
Squareness: Maximum 5.0mm
Surface defect: Clean surface without swell, flaws, scratches and abrasions in accordance with general visual inspection rules.

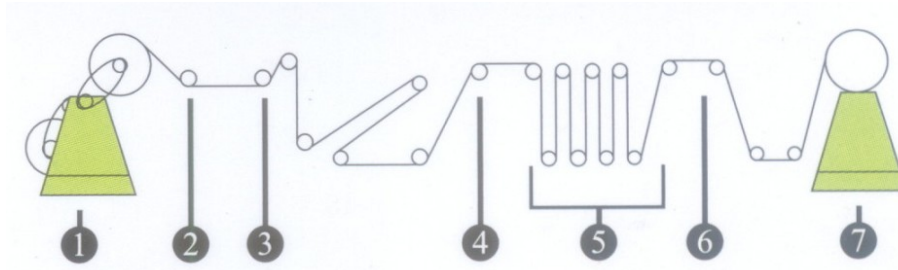
PACKING

Wooden case



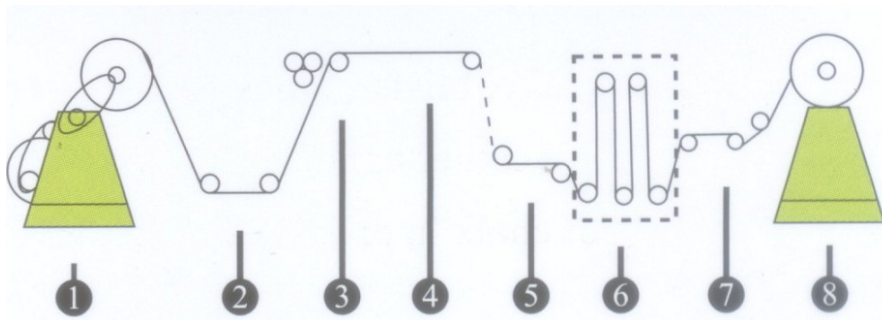
SEVEN ACP production process

CHEMOSYNTHESIS:



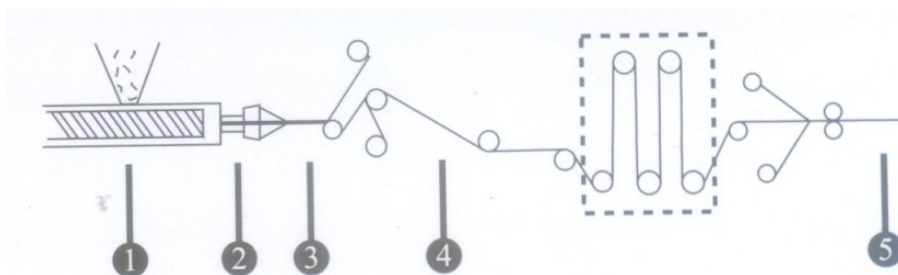
- | | |
|-------------------|-------------------|
| 1. Roll Expanding | 2. Degrease |
| 3. Degrease | 4. Neutralization |
| 5. Chemosynthesis | 6. Drying |
| 7. Rolling | |

COATING;



- | | |
|----------------------|-------------|
| 1. Rolling Expanding | 2. Drying |
| 3. Rolling coating | 4. Toasting |
| 5. Transfer | 6. Storage |
| 7. Q&C . | 8. Rolling |

LAMINATION AND FILM



- | | |
|------------------|--------------|
| 1. PE Extrusion | 2. Smoothing |
| 3. Adhesive film | 4. Transfer |
| 5. Compound | |

Technical data

coating test			
Test item	standard index	result	standard method
coating thickness	two coating ≥ 23 three coating ≥ 25	two coating 29.2 μ m three coating 35 μ m	ASTM B487-85 GB/T17748-2008
gloss		29.9 degree	ASTM D523-89
gloss tolerance	≤ 10	1.8	GB/T9754
color difference	$\Delta E \leq 2.0$	0.9	
pencil hardness	$\geq HB$	3H	ASTM D3363-05 GB/T6739
coating flexibility(T bend)	$\leq 2T$	2T	ASTM D4145-83 GB/ T17748-2008
mandrel bend test		Mandrel diameter for resistance to cracking: < 3mm	ASTM D522-93a
coating adhesive	grille space 1mm, tape 3M 898#	5B(best class)	ASTM D3359-08
	grille class 0	grille class 0	GB/T9286
	circle class 1	circle class 1	GB/T9286
impact resistance kg.cm	≥ 50 kg.cm no depainting, no crack	≥ 50 kg.cm no depainting, no crack	GB/T1732
Cuping test		5.88mm	ASTM D4145-83
grinding resistance L/ μ m	≥ 5	5.1	GB/T4957
boiling water resistance 98°C \pm 2°C, 2h	no change	no change	GB/T17748-2008
pollute resistance	$\leq 5\%$	2.82%	GB/T9780
nitric acid resistance	no bubble, pulverization color difference $\Delta E \leq 5.0$	no bubble, pulverization color difference $\Delta E = 0.48$	GB/T11942
hydrochloric resistance	5% hydrochloric, 24h no change	5% hydrochloric, 24h no change	GB/T17748-2008
alkaline resistance	5% sodium hydroxide 24h no bubble, pulverization color difference $\Delta E \leq 2.0$	5% sodium hydroxide 24h no bubble, pulverization color difference $\Delta E = 0.24$	GB/T11942
oil resistance	20# oil, 24h no change	20# oil, 24h no change	GB/T17748-2008
solvent resistance	no aluminium exposed, Butanone 200 times	no aluminium exposed, Butanone 400 times	GB/T17748-2008

scrub resistance	≥10000 cycles	≥15000 cycles	
salt spray resistance	4000h no change	4000h no change	GB/T1771, GB/T1740
detergent resistance		74°C ,168h no visual change	ASTM D2248-01a
physical performance			
Test item	standard index	result	standard method
face density	5.5kg/m ²	5.531kg/m ²	ASTM D5947-06
face density tolerance	±0.5kg/m ²	±0.1kg/m ²	
bending strength	≥100MPa	132Mpa	GB/T17748-2008
bending elastic modulus	≥2.0x10 ⁴ Mpa	3.0x10 ⁴ Mpa	GB/T17748-2008
180° peel strength	≥7.0N/mm	9.07N/mm	BG/T17748-1999
peel strength (separation speed: 152.4mm/mm)	average≥130 N.mm/mm min≥120 N.mm/mm	average≥149 N.mm/mm min≥138 N.mm/mm	GB/T17748-2008
temperature cycle resistance -40°C to 80°C, 50 cycles	peel strength change ≤10%	peel strength change ≤10%	GB/T17748-2008
	coating adhesive 1 class	coating adhesive 1 class	
	surface no change	surface no change	
shearing strength/ Mpa	≥22.0	29MPa	ASTM D732-02, GB/T17748-2008
thermal expansion coefficient	≤4.00 x 10 ⁻⁵ °C ⁻¹	2.08 x 10 ⁻⁵ °C ⁻¹	GB/T17748-2008
coefficient of liner thermal expansion	N2: 100ml/min	-50°C/0°C, 162.1µm/m·°C	ASTM E831-06
		0-40°C, 240.7µm/m·°C	
		40-80°C, 359.8µm/m·°C	
heat distortion temperature	≥95°C	99°C	ASTM D648-07 GB/T17748-2008 GB/T 1634.2
hot water resistance	98°C+/-2°C,2h, no change	98°C+/-2°C,2h, no change	GB/T17748-2008
fire resistant		Class 0	BS476 part 6 and part 7
	class c	class c	GB 8624
flexural strength	127*12.80*4.04mm speed: 1.7mm/min span:64mm	92.0MPa	ASTM D790-07
flexural modulus	127*12.80*4.04mm speed: 1.7mm/min span:64mm	7630MPa	ASTM D790-07



tensile strength	specimen: type 1 speed: 5mm/min	48.6MPa	ASTM D638-03
tensile strength at yield	specimen: type 1 speed: 5mm/min	49MPa	ASTM D638-03
wind pressure deformation		448Kg/m2	ASTM E330-84*
water absorb		0%	ASTM D570
warter leakage		4.48X10-4Kg/m2	ASTM E331-86