

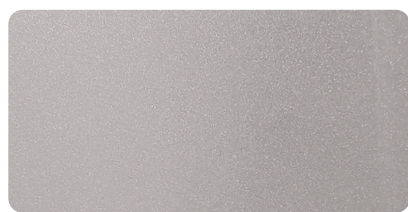


ALUMINIUM COMPOSITE PANEL



- ☐ THE PRODUCTION PASSED CE BS476 INTERTEK TEST
- ☐ ISO9001 QUALITY MANAGEMENT SYSTEM CERTIFICATION
- ☐ ISO14001 ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION
- ☐ CTC CHINA BUILDING MATERIAL CERTIFICATION
- ☐ PPG PAINT BASE KYNAR 500

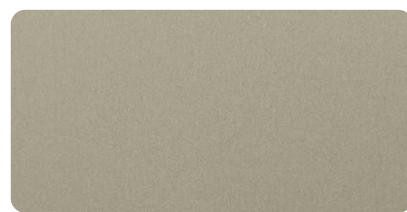




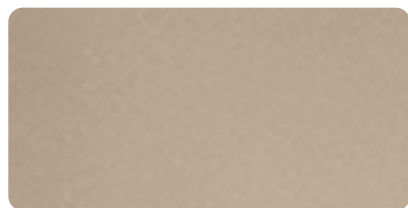
HS-701 Bright Silver



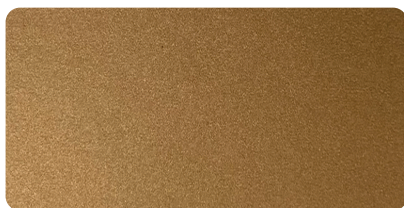
HS-702 Sub Silver



HS-719 Iron Grey



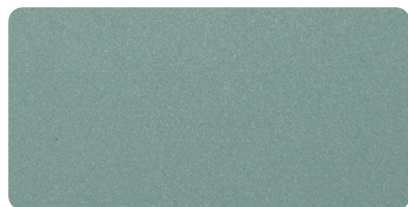
HS-707 Champagne Golden



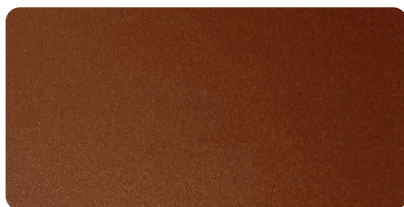
HS-738 Cooper



HS-711 Golden



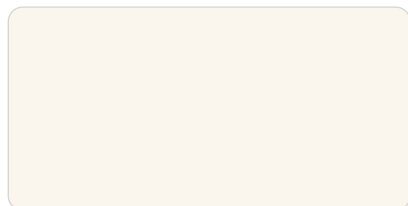
HS-716 Jade Silver



HS-739 Pearl Orange



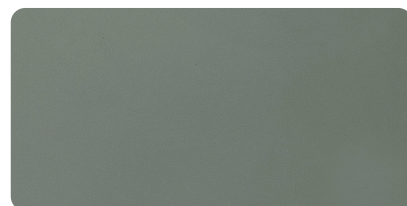
HS-714 Champagne Gold Metallic



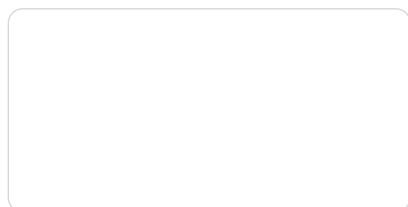
HS-736 Snow White



HS-720 Grey



HS-718 China Grey



HS-703 White



HS-713 Milk White



HS-721 Cream



HS-722 Pure Gold



HS-708 Green



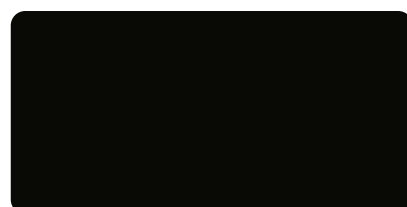
HS-715 Grey Ral



HS-737 Red



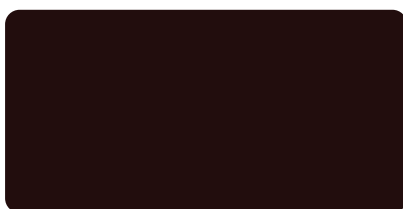
HS-775 Magenta Red



HS-762 Espresso



HS-709 Dark Blue



HS-742 Coffee



HS-748 Dark Green



HS-735 Signal Blue



HS-747 Dark Yellow



HS-731 Light Green Glossy



HS-746 Blue



HS-745 Yellow



HS-776 Signal Orange



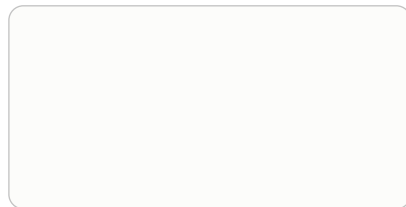
HS-729 Sea Blue



HS-755 Black



HS-706 Orange



HS-726 White Glossy



HS-705 Red Glossy



HS-723 Yellow Glossy



HS-728 Green Glossy



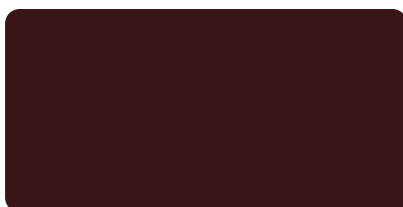
HS-733 Ruby Red Glossy



HS-749 Green Lime



HS-732 Brilliant Orange Glossy



HS-741 Brown Glossy



HS-710 Dark Blue Glossy



HS-712 Light Almond Glossy



HS-727 Signal Blue Glossy



HS-767 Pink Rose Glossy



HS-730 Blue Glossy



HS-725 Black Glossy



HS-750 Sparkling Purple



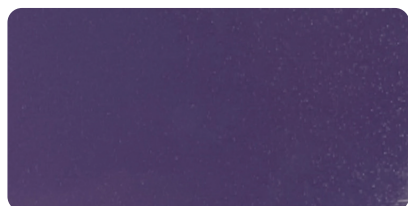
HS-760 Sparkling Green



HS-759 Sparkling Black



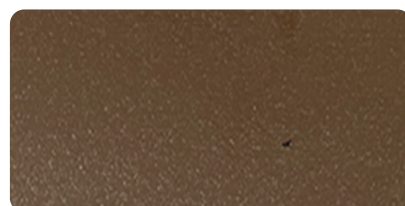
HS-768 Sparkling Red



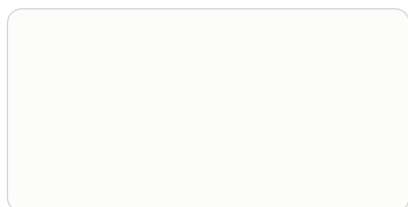
HS-751 Sparkling Violet



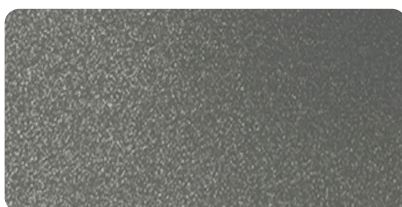
HS-761 Sparkling Blue



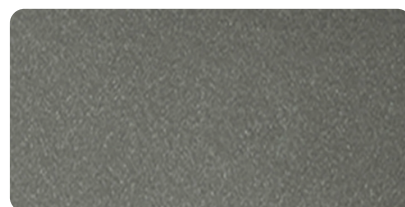
HS-744 Olive Brown



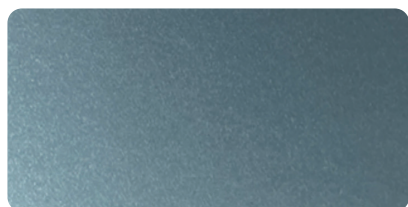
HS-763 Sparkling White



HS-758 Metallic Grey



HS-717 Metallic Black



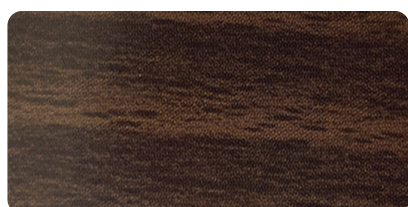
HS-771 Metallic Blue



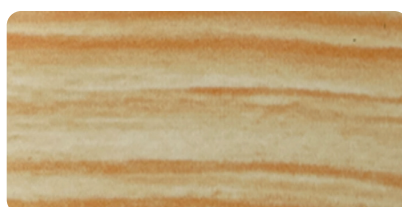
HS-769 Sparkling Autumn



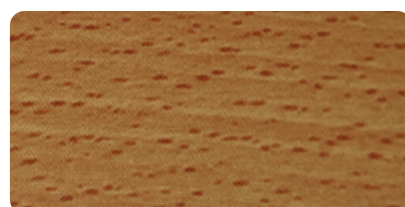
HS-770 Travertine Marble



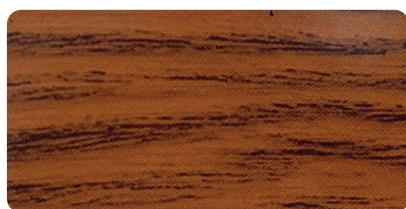
HS-420 Horse Chestnut



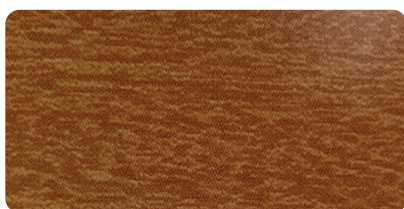
HS-418 Hazel Bright



HS-416 Savin Golden



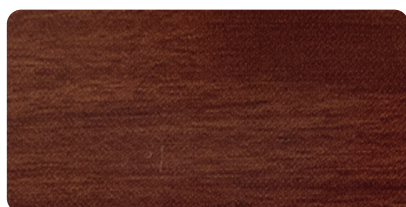
HS-773 Alpine Maple



HS-772 Mezereon Brown



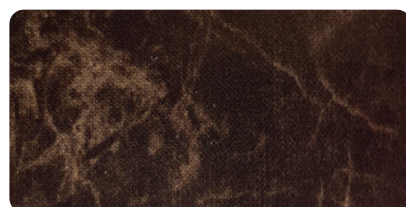
HS-403 Grape Rose



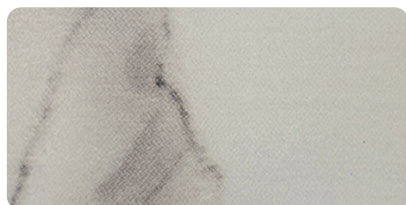
HS-757 Cornel Tree



HS-756 Stripe Daphne



HS-774 Marble



HS-521 White Granite



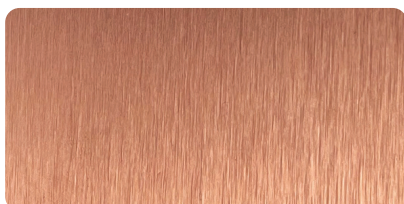
HS-734 Golden Glossy



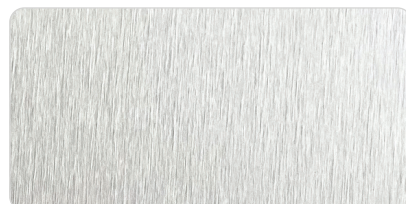
HS-765 Gold Mirror



HS-764 Silver Mirror



HS-603 Brush Bronze



HS-601 Brush Silver



HS-602 Brush Gold

Product Application Project



UPPPD Kalideres & Kembangan - Jakarta Barat



Tunas Muda School - Jakarta Barat



Pabrik Daikin Indonesia - Jawa Barat



Pertamina Research & Training Center - Jakarta Barat



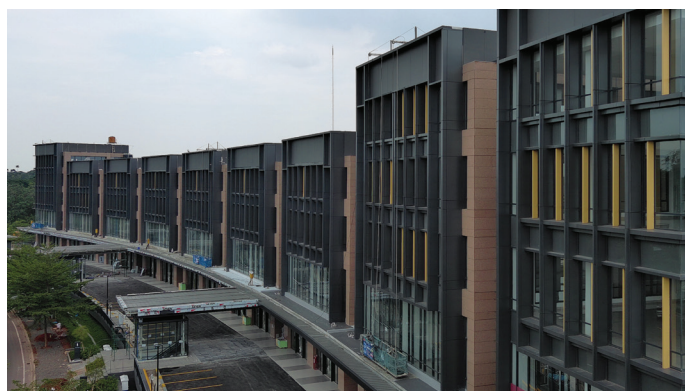
Sekolah SMK-SMAK Bogor - Jawa Barat



Binus University Bandung - Jawa Barat



STMKG - Tangerang Selatan



Nava Park North Point - Tangerang Selatan

Product Application Project



RS Edelweiss Cianjur - Jawa Barat



RSUP Dr. Hasan Sadikin Bandung - Jawa Barat



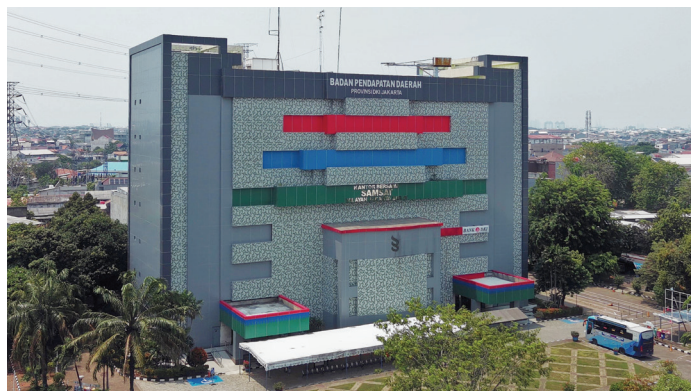
RS UPT Vertikal Makassar - Sulawesi Selatan



RSUP Dr. Sardjito - Yogyakarta



RS Kanker Dharmais - Jakarta Barat



Kantor Samsat - Jakarta Barat

HEAD OFFICE : MARKS BUILDING

Jl. Alam Sutera Boulevard No.7, Pakulonan,
Kec. Serpong Utara, Kota Tangerang Selatan,
Banten 15325



BSI Tower - Jakarta Pusat

test report of exterior						
No	test item	Standard index		test value	single item determination	
		high-class	qualified class			
1	appearance quality	vestige	indistinct	indistinct	high-class	
		coating omit	not allowed	no	high-class	
		ripples	not allowed	no	high-class	
		rubbls (≤ 1 mm)	not allowed	≤ 1/m ²	high-class	
		flaw (≤ 3 mm)	≤ 3/m ²	≤ 10/m ²	high-class	
		abrasion	not allowed	total length ≤ 100m ²	high-class	
		scratch	not allowed	total area ≤ 100m ²	high-class	
		total number of abrasion and scratch	not allowed	≤ 4	high-class	
2	dimensions deviation	aberration	indistinct	indistinct	high-class	
		length	±3mm	mm~+1.3mm	passed	
		width	±2mm	mm~+1.1mm	passed	
		thickness	±0.2mm	+0.04 mm~+0.20 mm	passed	
		squares	≤5mm	1.2mm	passed	
		edge unstraightness	≤1mm/m	0.15mm/m	passed	
		warpage	≤5mm/m	1.3mm/m	passed	
3	coating thickness	2 coat min. ≥25μm	27μm average 28μm	passed		
4	gloss tolerance	3 coat min. ≥25μm	36μm average 35μm	passed		
5	pencil hardness	≤ 10g (glossy>70) ≤ 5 (glossy ≤ 70)	1.8 (golss=42.2)	passed		
6	coating flexibility	≥ HB	3H	passed		
7	coating adhesive	≤ 2T	OT	passed		
8	coating adhesive	not lower than class I	class 0	passed		
9	impact resistance	50Kg.cm no depainting, no crack	50Kg.cm no depainting no crack	passed		
10	grinding resistance	≥ 5L / μm	12.9L/μm	passed		
11	boiling water resistance	no change	no change	passed		
12	pullute resistance	≤ 15%	2.5%	passed		
13	acid resistance	no change	no change	passed		
14	alkaline resistance	no change	no change	passed		
15	oil resistance	no change	no change	passed		
16	solvent resistance	no change	no change	passed		
17	scrub resistance	no change when ≥ 1000 times	no change when 1000 times	passed		
18	face density	specifide value+0.5Kg/m ²	5.59Kg/m ²	passed		
19	bending strength	100MPa	124.5MPa	passed		
20	bending elastic modulus	≥ 20x104MPa	3.20X104MPa	passed		
21	penetration resistance	≥ 9.0KN	9.8KN	passed		
22	shearing strength	≥ 28.0MPa	29.8MPa	passed		
23	180° peel strength	≥ 7.0N/mm	13.7N/mm	passed		
24	temperature cycle resistance	no change	no change	passed		
25	thermal expansion coefficient	≤ 4.00X10 ⁻⁵ °C ⁻¹	7.9X10 ⁻⁶ °C ⁻¹	passed		
26	heat distortion temperature	> 105°C	105°C	passed		
27	resistance salt spray	≤ grade 2	1 grade	passed		
artificial weathering	colour differences	≤ 3.0	1.05	passed		
	degradation of gloss	≤ grade 2	1 grade	passed		
	others	0 grade	0 grade	passed		

No.	test item	Standard index		test value	single item determination
		high-class	qualified class		
1	apperance quality	vestige	indistinct	indistinct	high-class
		coating omit	not allowed	no	high-class
		ripples	not allowed	no	high-class
		rubbls(<1mm)	not allowed	≤ 1/m ²	high-class
		flaw(≤3mm)	≤ 3/m ²	≤ 10/m ²	high-class
		abrasion	not allowed	total length 100m ²	high-class
		scratch	not allowed	total area 300/m ²	high-class
		total number of abrasion and scratch	not allowed	≤ 4	high-class
2	dimensions deviation	aberration	indistinct	indistinct	high-class
		length	±3mm	0mm~+1.7mm	passed
		width	±2mm	0mm~+1.2mm	passed
		thickness	±0.2mm	+0.8mm~+0.12mm	passed
		squares	≤ 5mm	1.2mm	passed
		edge unstraightness	≤ 1mm/m	0.20mm/m	passed
		warpage	≤ 5mm/m	1.2mm/m	passed
3	coating thickness	min. ≥ 16μm	19μm average 20μm	passed	
4	gloss tolerance	≤ 10g (glossy>70)	1.8 (golss=42.2)	passed	
5	pencil hardness	≥ HB	3H	passed	
6	coating flexibility	≤ 3T	1T	passed	
7	coating adhesive	not lower than class I	class 0	passed	
8	impact resistance	50Kg.cm no depainting, no crack	50Kg.cm no depainting no crack	passed	
9	boiling water resistance	no change	no change	passed	
10	acid resistance	no change	no change	passed	
11	alkaline resistance	no change	no change	passed	
12	oil resistance	no change	no change	passed	
13	solvent resistance	no change	no change	passed	
14	scrub resistance	no change when 10000 times	no change when 10000 times	passed	
15	face density	specifide value ± 0.5 Kg/m ²	3.61kg / m ²	passed	
16	bending strength	≥ 60MPa	68.3MPa	passed	
17	bending elastic modulus	≥ 1.5 x 104MPa	2.01x104MPa	passed	
18	penetration resistance	≥5KN	5.0KN	passed	
19	shearing strength	>20.0MPa	20.4MPa	passed	
20	180° peel strength	≥ 5.0N / mm	6.3N/mm	passed	
21	temperature cycle resistance	no change	no change	passed	
22	thermal expansion coefficient	≤ 4.00x10 ⁻⁶ °C ⁻¹	5.7x10 ⁻⁶ °C ⁻¹	passed	
23	heat distortion temperature	≥ 95 °C	99 °C	passed	

