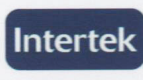




ALUMINIUM COMPOSITE PANEL

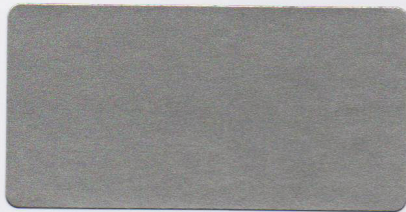


- ☐ THE PRODUCTION PASSED CE BS476 INTERTEK TEST
- ☐ ISO9001 QUALITY MANAGEMENT SYSTEM CERTIFICATION
- ☐ ISO14001 ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION
- ☐ CTC CHINA BUILDING MATERIAL CERTIFICATION
- ☐ PPG PAINT BASE KYNAR 500

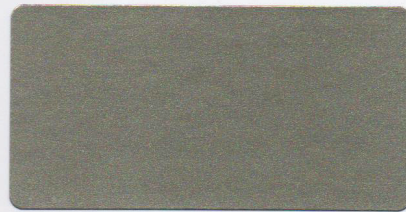




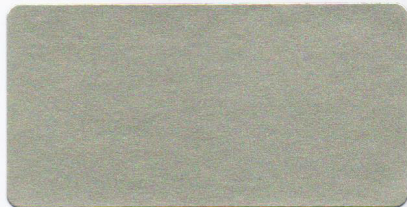
HS-701 Bright Silver



HS-702 Sub Silver



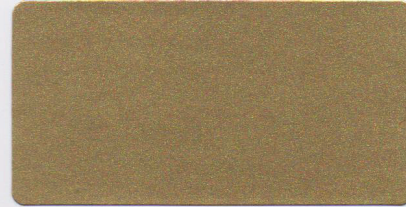
HS-719 Iron Grey



HS-707 Champagne Golden



HS-738 Cooper



HS-711 Golden



HS-716 Jade Silver



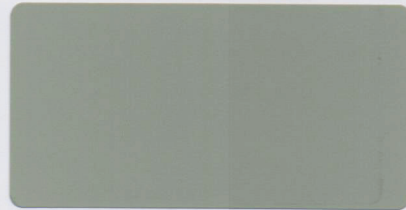
HS-739 Pearl Orange



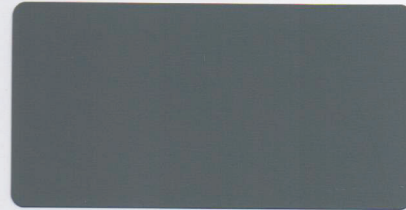
HS-714 Champagne Gold Metallic



HS-736 Snow White



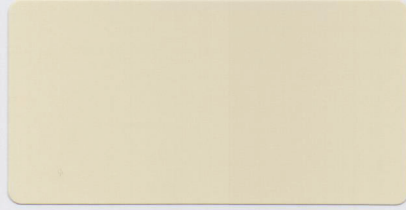
HS-720 Grey



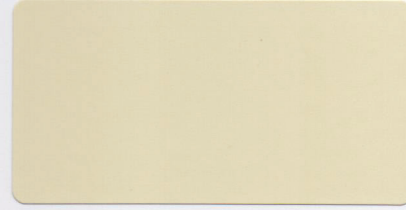
HS-718 China Grey



HS-703 White



HS-713 Milk White



HS-721 Cream



HS-722 Pure Gold



HS-708 Green



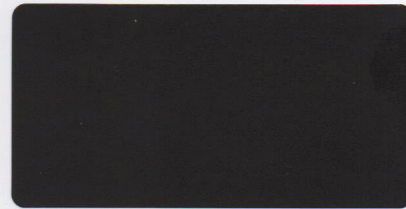
HS-715 Grey Ral



HS-737 Red



HS-775 Magenta Red



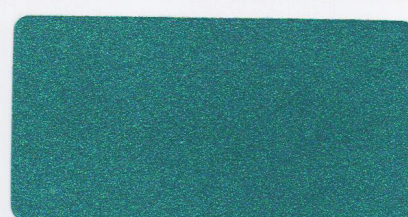
HS-762 Espresso



HS-709 Dark Blue



HS-742 Coffee



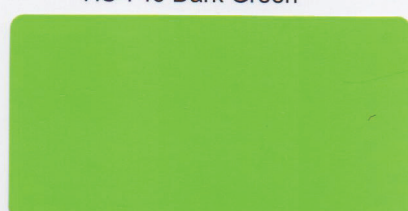
HS-748 Dark Green



HS-735 Signal Blue



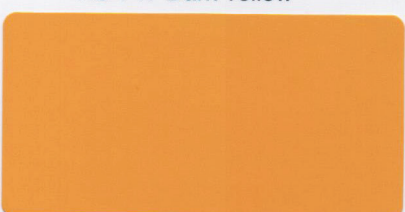
HS-747 Dark Yellow



HS-731 Light Green Glossy



HS-746 Blue



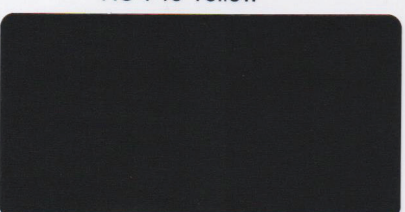
HS-745 Yellow



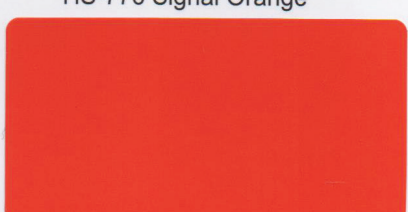
HS-776 Signal Orange



HS-729 Sea Blue



HS-755 Black



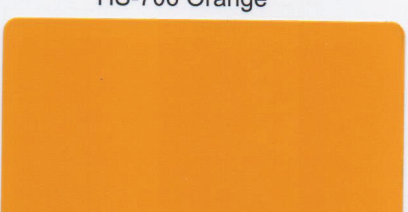
HS-706 Orange



HS-726 White Glossy



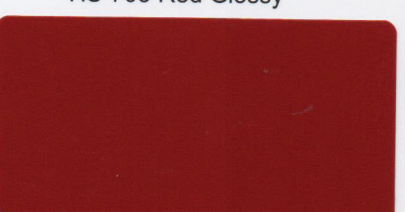
HS-705 Red Glossy



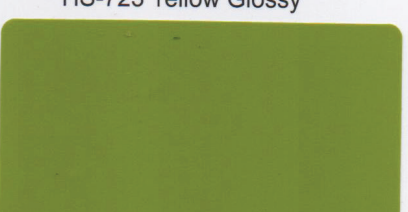
HS-723 Yellow Glossy



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



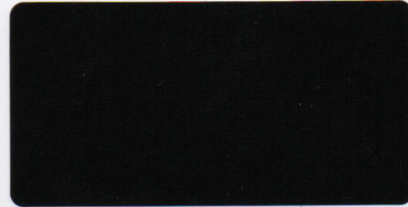
HS-727 Signal Blue Glossy



HS-767 Pink Rose Glossy



HS-730 Blue Glossy



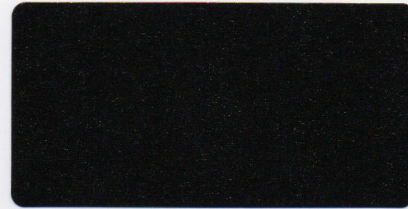
HS-725 Black Glossy



HS-750 Sparkling Purple



HS-760 Sparkling Green



HS-759 Sparkling Black



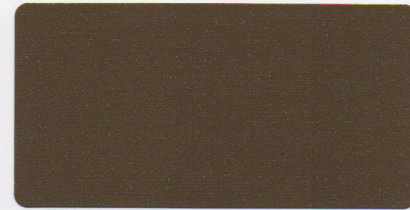
HS-768 Sparkling Red



HS-751 Sparkling Violet



HS-761 Sparkling Blue



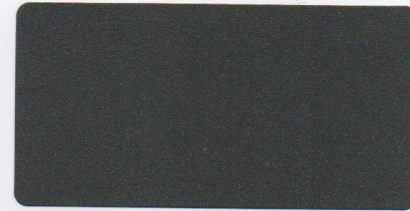
HS-744 Olive Brown



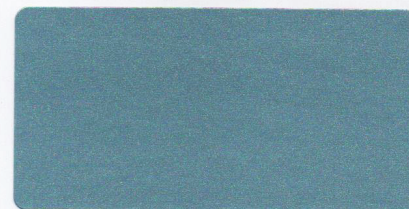
HS-763 Sparkling White



HS-758 Metallic Grey



HS-717 Metallic Black



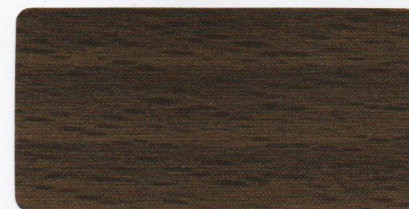
HS-771 Metallic Blue



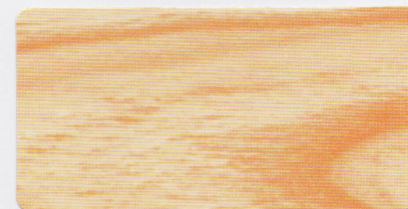
HS-769 Sparkling Autumn



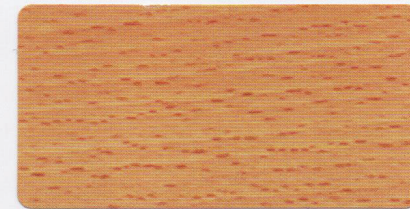
HS-770 Travertine Marble



HS-420 Horse Chestnut



HS-418 Hazel Bright



HS-416 Savin Golden



HS-773 Alpine Maple



HS-772 Mezereon Brown



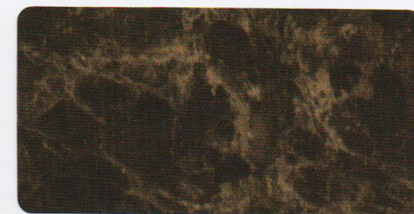
HS-403 Grape Rose



HS-757 Cornel Tree



HS-756 Stripe Daphne



HS-774 Marble



HS-521 White Granite



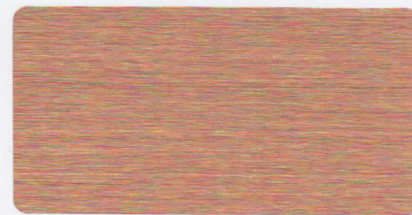
HS-734 Golden Glossy



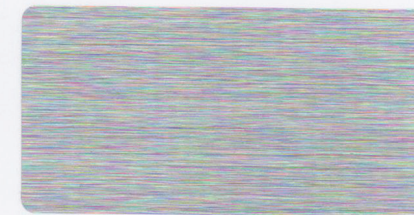
HS-765 Gold Mirror



HS-764 Silver Mirror



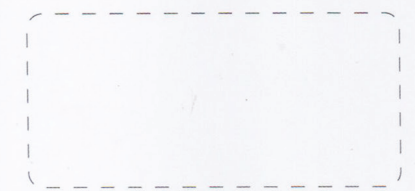
HS-603 Brush Bronze



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

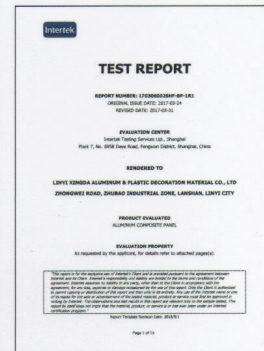
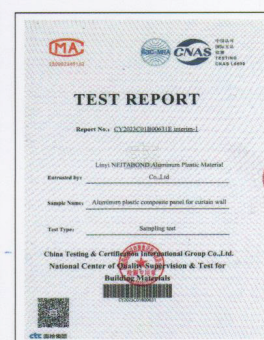
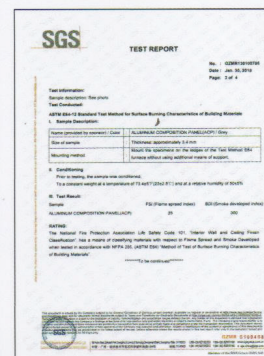
HEAD OFFICE : MARKS BUILDING

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	indistinct	no	high-class
		rubblles (≤ 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
3	coating thickness	2 coat min, ≥25μm	27μm average 28μm	passed	passed
		3 coat min, ≥25μm	36μm average 35μm	passed	passed
4	gloss tolerance	≤ 10g (glossy>70) ≤ 5 (glossy ≤ 70)	1.8 (golss=42.2)	passed	passed
5	pencil hardness	≥ HB	3H	passed	passed
6	coating flexibility	≤ 2T	OT	passed	passed
7	coating adhesive	not lower than class I	class 0	passed	passed
8	impact resistance	50Kg.cm no depainting, no crack	50Kg.cm no depainting no crack	passed	passed
9	grinding resistance	≥ 5L / μm	12.9L/μm	passed	passed
10	boiling water resistance	no change	no change	passed	passed
11	pullute resistance	≤ 15%	2.5%	passed	passed
12	acid resistance	no change	no change	passed	passed
13	alkaline resistance	no change	no change	passed	passed
14	oil resistance	no change	no change	passed	passed
15	solvent resistance	no change	no change	passed	passed
16	scrub resistance	no change when ≥ 1000 times	no change when 1000 times	passed	passed
17	face density	specifide value+0.5Kg/m ²	5.59Kg/m ²	passed	passed
18	bending strength	100MP	124.5MPa	passed	passed
19	bending elastic modulus	≥ 20x104MPa	3.20X104MPa	passed	passed
20	penetration resistance	≥ 9.0KN	9.8KN	passed	passed
21	shearing strength	≥ 28.0MPa	29.8MPa	passed	passed
22	180° peel strength	≥ 7.0N/mm	13.7N/mm	passed	passed
23	temperature cycle resistance	no change	no change	passed	passed
24	thermal expansion coefficient	≤ 4.00X10-5°C-1	7.9X10-6-°C-1	passed	passed
25	heat distortion temperature	> 105°C	105°C	passed	passed
26	resistance salt spray	≤ grade 2	1 grade	passed	passed
27	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	appearance quality	vestige	indistinct	indistinct	high-class
		coating omit	not allowed	no	high-class
		ripples	indistinct	no	high-class
		rubblles (≤ 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 300m 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
3	coating thickness	min, ≥ 16μm	19μm average 20μm	passed	passed
		gloss tolerance	≤ 10g (glossy>70)	1.8 (golss=42.2)	passed
4	pencil hardness	≥ HB	3H	passed	passed
5	coating flexibility	≤ 3T	1T	passed	passed
6	coating adhesive	not lower than class I	class 0	passed	passed
7	impact resistance	50Kg.cm no depainting, no crack	50Kg.cm no depainting no crack	passed	passed
8	boiling water resistance	no change	no change	passed	passed
9	acid resistance	no change	no change	passed	passed
10	alkaline resistance	no change	no change	passed	passed
11	oil resistance	no change	no change	passed	passed
12	solvent resistance	no change	no change	passed	passed
13	scrub resistance	no change when 10000 times	no change when 10000 times	passed	passed
14	face density	specifide value ± 0.5 Kg/m ²	3.61kg / m ²	passed	passed
15	bending strength	≥ 60MPa	68.3MPa	passed	passed
16	bending elastic modulus	≥ 1.5 x 104MPa	2.01x104MPa	passed	passed
17	penetration resistance	≥ 5KN	5.0KN	passed	passed
18	shearing strength	> 20.0MPa	20.4MPa	passed	passed
19	180° peel strength	≥ 5.0N / mm	6.3N/mm	passed	passed
20	temperature cycle resistance	no change	no change	passed	passed
21	thermal expansion coefficient	≤ 4.00x10-6 °C-1	5.7x10 - 6 °C-1	passed	passed
22	heat distortion temperature	≥ 95 °C	99 °C	passed	passed