

# Tinted Glass

 Panasap 



# PANASAP

## The Finest heat absorbing glass in colourful choices

Panasap is float glass with a tint, made by adding metals like cobalt manganese, selenium, etc.

Panasap is tinted transparent glass in which element of cobalt, manganese and selenium have been added to the ordinary glass composition to provide properties of heat absorption. The glass is processed through 'Float Process' which is resulted in a very high quality glass that is perfectly flat, distortion free with excellent appearance.

### Colorful and Comfortable

Panasap is very appealing to architecture as an integral part of modern high rise building design. Since Panasap absorbs nearly 35-55% of total solar radiant energy, it offers far more protection from solar heat than ordinary glass, blocks the light from outside and reduces harmful ultraviolet ray penetration.

In effect, such external heat absorption shall result in desirable cost saving from less air conditioner usage. Besides its ability to absorb solar heat, Panasap is very comfortable and pleasant to anyone working or leaving inside.

The degree of color intensity means more privacy. Acting as visual barrier from external view, this exceptional colored glass panel does not limit any view from inside, which is advantageous. Available in wide range colors, Panasap maintains its properties during the whole span of its lifetime, as the tint is not a coating but blended in the process.

The color characteristics also enable Panasap to deflect solar rays, resulting in softened and reduce direct sunlight entering the room during daytime. Whenever included in the interior space design, such light intensity factor can also save energy from interior lighting during daylight, without letting the heat go through.



## Technical Characteristic

PANASAP										
Type of Glass	Standard Thickness (mm)	Energy Characteristic				Light Characteristic		Solar Factor (%)	Shading Coefficient *3*4	U Value W/m²k
		Transmittance (%)	Reflectance (%)	Absorption (%)	Ultra Violet Transmission (%)	Transmittance (%)	Reflectance (%)			
Panasap Bronze (BRFL)	5	56	5	39	25	55	5	67	0.77	5.8
	6	50	5	44	20	50	5	64	0.73	5.8
	8	41	5	54	14	41	5	58	0.66	5.7
Panasap Dark Grey (DGFL)	3	52	5	43	55	38	5	65	0.74	5.9
	4	43	5	52	49	28	4	59	0.67	5.9
	5	36	5	59	44	21	4	54	0.62	5.8
	6	31	4	65	40	15	4	50	0.58	5.8
Panasap Green (GNFL)	5	43	5	52	24	74	7	58	0.67	5.8
	6	38	5	57	20	70	6	55	0.63	5.8
	8	30	5	65	14	64	6	50	0.58	5.7
	10'	25	5	70	10	59	6	47	0.54	5.7
	12	21	4	74	7	54	6	44	0.51	5.6
Panasap Euro Grey (GEFL)	4	57	5	38	32	56	6	68	0.78	5.9
	5	50	5	45	26	49	5	63	0.73	5.8
	6	44	5	51	22	43	5	59	0.68	5.8
	8	35	5	61	15	34	5	53	0.61	5.7
	10'	27	4	68	11	26	5	48	0.55	5.7
	12	21	4	75	8	20	4	45	0.51	5.6
Panasap Blue Green (BNFL)	5	44	5	51	28	66	6	59	0.68	5.8
	6	39	5	56	24	62	6	56	0.64	5.8
	8	31	5	64	17	55	6	51	0.58	5.7
Panasap Dark Blue (DHFL)	5	50	5	45	35	62	6	63	0.72	5.8
	6	44	5	51	31	58	6	59	0.68	5.8
	8	36	5	60	24	49	5	54	0.61	5.7
	10'	29	5	67	19	42	5	49	0.56	5.7
	12	23	4	72	15	36	5	46	0.53	5.6

### Remarks :

- The data are calculated using spectral measurements that are conform to standards EN 410 (1998), ISO 9050, WIS/WINDAT, Illuminant A observer 20 CIE 1931.
- Energy properties according to ISO / DIS 9050, NFRC 100-2001 and/or EN 410.
- U value (formerly k-value) is calculated according to standard ISO EN 673 and/or NFRC 100-2001 conditions.
- Ultra Violet Transmittance according ISO/DIS 9050 table 4, DIN 67507 clause 6 table 4, pr-EN 410 table 3 (280nm-380nm).
- This document is no evaluation of the risk of glass breakage due to thermal stress. For tempered glass the risk of spontaneous breakage due to Nickel-Sulfide is not covered by PT Asahimas Flat Glass Tbk. The Heat Soak Test is available on request.
- Specifications, technical and other data are based on information available at the time of preparation of this document and are subject to change without notice. PT Asahimas Flat Glass Tbk ca not be held responsible for any deviation between the data introduced and the the conditions on site.

## Features

Behind the finest heat absorbing glass that has various colors collection, we present the colorful and dynamic lifestyle you have never imagined. It turns your room into paradise with its excellent tints.

## Range

Panasap Dark Blue, Panasap Green, Panasap Blue Green, Panasap Euro Grey, Panasap Dark Grey, Panasap Bronze.

## Application

- ▶ Exterior of general office buildings, commercial buildings and houses
- ▶ Interior such as furniture, partition interior design
- ▶ Other decorative purposes

## Notes

The thicker Panasap is, the darker it becomes and it performs higher heat absorbance. Sometimes it makes Panasap easier to be cracked by heat than Indoflot, therefore extra attention must be taken during installation and maintenance

- ▶ The edges must be grinded before installation to reduce risk of breakage
- ▶ Be careful not to allow an air-conditioning air blow to hit the glass surface directly
- ▶ Be careful not to fix a thick curtain or place, furniture, etc closely to the glass to avoid thermal breakage
- ▶ Use high quality elastic sealant (polysulfide, silicone sealant, etc) as sealing material
- ▶ Clean the glass periodically (once every 2 or 3 month) or every month if the external wall was contaminated with concrete or mortar to prevent an alkaline effect



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