Product information BI-Color

1. Description

BI-Color is a glass which is coated with ceramic colours. The colours are stove-enamelled at about 650°C and thus solidly fixed to the glass. They are therefore resistant to wear, solvents, UV and yellowing, as well as being resistant to thermal shocks up to 200 K. The decades of experience of BGT Bischoff Glastechnik began with the use of colours in the industrial area. For cooker panels and doors the colours had to withstand high temperature variations as well as frequent chemical and mechanical stresses from cleaning agents and equipment. Through thorough and persitent further development in quality and multiplicity, colour-printed glazing is also used today both for internal as well as external construction in the building sector. Alongside their use as design elements the colours also fulfill additional functions. To name just a few:

- Reduction in the level of radiation from the sun
- Reduction in dazzle
- Screening
- Light scatter
- Safety
- Slip prevention, etc.

These functions are used for example in applications such as roof glazing, balustrades, partition walls, canopies, display windows, illuminated ceilings, indicator panels and walk-on surfaces. There are two processes for the colour coating of glass. The screen printing process permits the partial printing af areas with décors. In the roller printing process the glass is fully colour-coated over the whole surface and the coloured surface displays a slight texture.

2. Dimensions

2.1 Minimum dimensions

The minimum dimensions are 100 x 250 mm for screen printing and 200 x 300 mm for roller printing.

2.2 Maximum production dimensions

Glass thickness	Maximum dimensions in mm	
	Screen printing	Roller coating
4 mm	1000 x 2000	1000 x 2000
5 mm	1200 x 2000	1600 x 2000
6 mm	2700 x 6000	1600 x 7000
8 mm	2700 x 6000	1600 x 7000
10 mm	2700 x 6000	1600 x 7000
12 mm	2700 x 6000	1600 x 7000
15 mm	2700 x 6000	1600 x 7000
19 mm	upon request	

Greater dimensions upon request

3. Glass types

Apart from single float glass with its inherent green colour, standard commercial pyrolytically-coated (hard-coated) sun protection glass panes can be colour-coated. Please ask about the technical feasibility of other types of glass. For light colours and backlit applications we recommend the use of low iron-oxide glass, which has almost no inherent colour. After the stove enamelling process the glass becomes a full-quality safety glass with its important mechanical and thermal safety properties. All BI-Color glass panes can be combined into laminated and/or insulating glass.

4. Colours

The colours are orientated to the German industrial RAL HR 840 colour register. On top of this the BGT Department for Colour Developments makes up ceramic colours according to external colour proposals and other colour registers.

4.1 Opaque colours

Opaque colours have covering properties and have only a low light transmitting capacity.

4.2 Metallic colours

In the field of metallic colours BGT offers a broad spectrum of options. Apart from the colours listed in the RAL register of white aluminium (RAL 9006) and grey aluminium (RAL 9007), BGT has developed numerous opaque colours with a metallic gloss. Further colours with a metallic effect can be developed according to your wishes.

4.3 Translucent colours

The translucent, silk-matt colours have a sand-blasted or etched appearance. In contrast to these techniques the ceramic, silk-matt colours are significantly more resistant to contamination and they are easier to clean. Silk-matt colours can be obtained with different levels of transparency as well as self-coloured versions. Silk-matt colours can also be used as desired in all sorts of décors.

4.4 Transparent colours

These colours have high light transmitting capacity and good transparency. For all colour systems the following is true: The colour effect can be different depending on the type of glass, the thickness of the glass and whether the view is onto or from behind the glass. We recommend that sampling is first carried out with information on the conditions and the purpose of the application.

5. Décors

BGT overs over 50 standard décors. Screen drafts are available for these décors and there are no additional preparation costs for these items. Apart from this comprehensive range of standard décors your individual wishes can be realized. Through the screen printing technology arbitrary shapes can be exposed as a screen. One screen draft and one screen is prepared for each décor.

6. BI-ThermColor®

If colour-coated glass is combined into insulating glass the result is called BI-ThermColor®, which permits freely-determinable sun and dazzle protection. Apart from the basic glass, which is used, the colour and the degree of printing are important factors which influence the technical radiation factors. The following table gives information on the degree of printing, changed g-values and light transmitting capacity of the standard BGT décors using the example of the colour white. You can obtain detailed information on BI-ThermColor® from the BGT product information sheet "BI-ThermColor®".

7. Technical data

The following table gives information over degree of printing, chanced G-value and light transmittance by the example to the colour white.

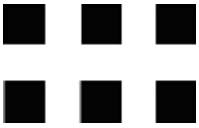
Degree of printing a in %	G-value* in %	Light transmittance * in TAU V in %
10	75	79
20	71	73
30	66	67
40	62	62
50	58	55
60	54	50
70	50	44
80	45	39
90	41	33
100	37	27

* With respect to float 6 mm, colour coating RAL 9010, colour white B 2082.93.

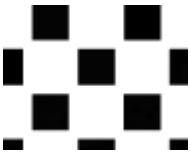
Degree of printing: The choice of décor determines the degree of printing. This shows the ratio of the printed to the whole surface.

8. Standard décors

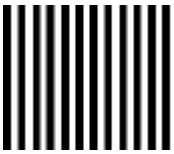
Décor no.: R 11.008.25
Degree of printing: 25 %



Décor no.: R 11.015.32
Degree of printing: 32 %

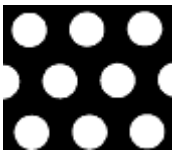


Décor no.: S 01.015.49
Degree of printing: 49 %

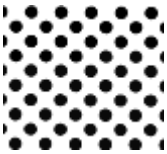


Décor no.: S 01.017.50
Degree of printing: 50 %

Décor no.: L 11.009.68
Degree of printing: 68 %



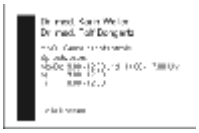
Décor no.: P 11.003.32
Degree of printing: 32 %



Graduated grid
With a graduated grid the degree of printing can be varied per pane. The graduation is achieved by reducing or enlarging the diameters or widths of the geometric shapes. Graduated grids can be realized up to the maximum technical printing dimension of 2700 x 6000 mm.
We will be happy to advise you on the planning and development of a graduated grid.

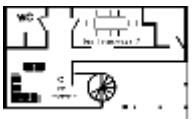
9. BI-Color Signs

... for all public and private applications

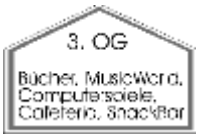


Nameplates

House numbers



Direction signs



Information signs