SAINT-GOBAIN
GLASS

SGG SERALIT® EVOLUTION

Lead-free screen-printed toughened glass*

Technical Sheet

United Kingdom

www.saint-gobain-glass.com

SAINT-GOBAIN GLASS DESIGN

SGG SERALIT® EVOLUTION

Lead-free screen-printed toughened glass*

Description

SGG SERALIT EVOLUTION is an opaque or translucent glass, patterned with coloured ceramic enamel. The pattern is applied using a textile screen. The enamels used do not contain any dangerous metals* such as lead, cadmium, mercury or chromium VI. The enamel is fired at a very high temperature, so that it fuses to the surface of the glass, giving it exceptional durability. SGG SERALIT EVOLUTION is a toughened glass.

* < 1000 ppm content of the enamel.

Applications

Façades
• Double-glazed units: SGG SERALIT EVOLUTION combines an attractive appearance with functionality. It provides good visibility from indoors to outdoors and protects against glare.

Laminated SGG SERALIT EVOLUTION
This can be used for guarding, roofing elements or footbridges, combining, various patterns and colours.

Street furniture
SGG SERALIT EVOLUTION is a durable, safe product which is ideal for use in street furniture, advertising and information panels.

Interior applications
SGG SERALIT EVOLUTION provides different levels of light transmittance, bringing light and safety to doors, partitions, guarding, shower cubicles and furniture.

Advantages

More environmentally friendly
SGG SERALIT EVOLUTION is free from lead and other dangerous materials thus environmentally friendly and totally recyclable. The almost total absence of polluting waste products protects nature and health.

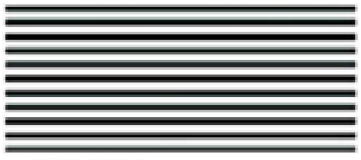
Design options and functionality
SAINT-GOBAIN GLASS has a wide range of standard patterns which can be produced in a number of colours. Personalised patterns, which may be in several colours, can be designed for specific projects. On façades SGG SERALIT EVOLUTION increases the solar control performance of double-glazed units. The spectrophotometric properties vary according to the density and colour of the pattern.

Exceptional durability and safety
SGG SERALIT EVOLUTION is a toughened glass conforming to standard BS EN 12150. It provides all the durability and safety characteristics of toughened glass. For both façades and interior applications the colours remain totally stable over time.

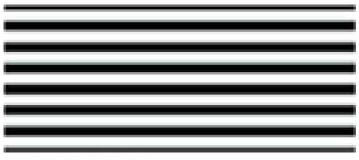
Simple installation
SGG SERALIT EVOLUTION is installed as ordinary toughened glass.

SGG SERALIT EVOLUTION COLOR
This pattern is opaque and bright. It can be produced in standard or bespoke colours (on a project basis).

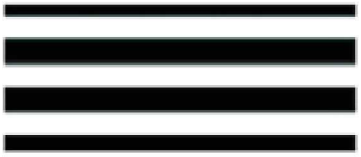
SGG SERALIT EVOLUTION OPALE
The pattern is translucent and matte. SGG SERALIT EVOLUTION is available in a range of exclusive patterns specially designed for facades and interior applications.
Screen printing can be used to create any type of pattern proposed by the designer. It is also possible to apply patterns in two or more colours on request (please contact SAINT-GOBAIN GLASS for more information).



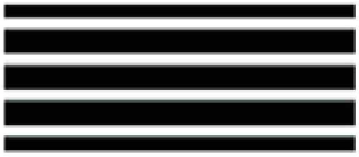
SGG SERALIT SL-L01 :
2 mm lines, with 4 mm spaces between the lines, 33% coverage



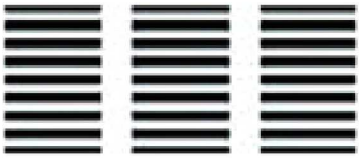
SGG SERALIT SL-L02 :
4 mm lines, with 5 mm spaces between the lines, 44% coverage



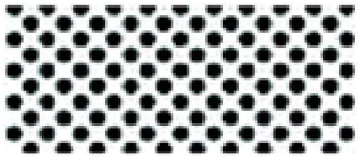
SGG SERALIT SL-L03 :
10 mm lines, with 10 mm spaces between the lines, 50% coverage



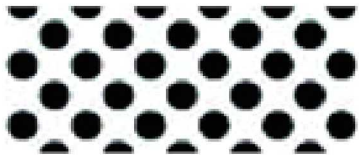
SGG SERALIT SL-L04 :
10 mm lines, with 5 mm spaces between the lines, 67% coverage



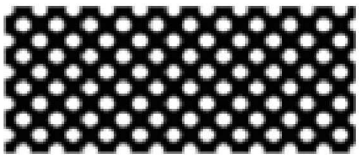
SGG SERALIT S5 L-DO:
30 mm columns, 10 mm apart and 3 mm spaces between the lines, 38% coverage



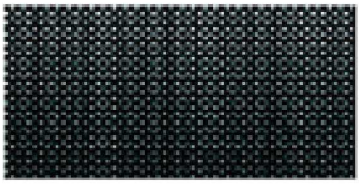
SGG SERALIT SL-P06 :
4 mm diameter dots, 39% coverage



SGG SERALIT SL-P07 :
12 mm diameter dots, 44% coverage



SGG SERALIT SL-P08 :
4 mm diameter transparent dots on a solid background, 61% coverage



SGG SERALIT SL-P09 :
Graduated dot matrix, graduating from solid to clear

Range .../...

The products can be manufactured using:
- SGG PLANILUX clear float glass - SGG DIAMANT extra clear glass
- SGG PARSOL body-tinted glass
- SGG ANTELIO and SGG COOL-LITE ST solar control glass.

Manufacturing sizes

Thickness (mm)	6-19
Maximum dimensions (mm)	3600 x 2130
Minimum dimensions (mm)	500 x 300

Manufacturing tolerances: refer to standard BS EN 12150

Max. length/width ratio: 1/10
Dimensions up to 4800mm length are available. Please contact SAINT-GOBAIN GLASS for details.

Notes
• The colours will vary slightly according to the thickness of the glass.
• To obtain a uniform colour, only one thickness of glass should be used in a project.
• A colour difference of delta E*= 1.5 (C.I.E. L a*b*) measured on the surface of the glass is acceptable between two panes with the same colour enamel.

Performances

SGG SERALIT EVOLUTION provides, or increases, the solar control performance of glazing on façades. The spectrophotometric performance of black and white patterns, covering 30% and 50% of the surface of the glass, are given for:
- Single glazing
- In SGG CLIMAPLUS DESIGN enhanced thermal insulation double-glazed units, with SGG PLANITHERM TOTAL low-emissivity glass.

SGG SERALIT EVOLUTION Single glazing									
SGG SERALIT EVOLUTION (1)		White				Black			
Thickness	mm	6	6	6	6	6	6	6	6
Enamel coverage (1)	%	30	30	50	50	30	30	50	50
Enamel position	face	1	2	1	2	1	2	1	2
Light factor									
LT	%	70	70	57	57	62	62	44	44
LRe	%	22	15	31	19	8	7	8	6
LRi	%	15	22	19	31	7	8	6	8
Energy factor									
T	%	64	64	54	54	55	55	40	40
Re	%	18	12	24	16	8	7	8	6
Ri	%	12	18	16	24	7	8	6	8
AE	%	18	24	22	30	37	38	52	54
Solar factor g		0,69	0,70	0,60	0,62	0,65	0,65	0,53	0,53
Shading Coefficient		0,79	0,84	0,69	0,71	0,74	0,74	0,60	0,60
U-value	W/(m².K)	5,7	5,7	5,7	5,7	5,7	5,7	5,7	5,7

1) These are approximate values given for small detail patterns, homogenously covering the glass surface, screen-printed with a standard white or black enamel. These values also depend on the manufacturing conditions.

Processed Product Variations

SGG SERALIT EVOLUTION can be:
- laminated* to obtain the performance of an SGG STADIP laminated glass
- acoustically laminated* to obtain the acoustic comfort of STADIP SILENCE
- assembled in SGG CLIMAPLUS DESIGN double-glazed units for thermal comfort
- curved (please contact SAINT-GOBAIN GLASS)
- heat-strengthened, for certain applications.

* As SGG SERALIT EVOLUTION is toughened (or heat strengthened), the other component of the laminated unit must also be toughened (or heat strengthened). The enamelled face must be situated on the outside of the assembly.

Installation Guidelines

SGG SERALIT EVOLUTION must always be installed in accordance with current safety standards and national regulations. SGG SERALIT EVOLUTION can be glazed in channels, held in place using cover strips or metal fixings. Every precaution must be taken to avoid glass-to-glass and glass-to-metal contact. When products are installed adjacently there must be a minimum clearance of 3 mm between each pane.
SGG SERALIT EVOLUTION can also be installed in exterior structural sealant glazing, in single glazing or in double-glazing. Please contact our technical department to check the compatibility of the sealant with the enamel.
In order to preserve its original appearance, SGG SERALIT EVOLUTION should not be installed with the enamel facing towards the outside of the building (face 1).
In façades, SGG SERALIT EVOLUTION can be Heat-Soak Tested in accordance with standard BS EN 14179 if required.
This treatment is not necessary if the heat strengthened version of SGG SERALIT EVOLUTION is used.

Maintenance
To maintain its attractive appearance, SGG SERALIT EVOLUTION must be regularly cleaned with neutral agents that are free from harsh abrasive materials.

Twinning Center, Eindhoven, The Netherlands

Standards and Regulations

SGG SERALIT EVOLUTION is a toughened glass conforming to standard BS EN 12150. It can also be heat strengthened, in accordance with standard BS EN 1863.

SAINT-GOBAIN GLASS

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