



SAINT-GOBAIN
GLASS



SGG MIRALITE®
REVOLUTION

Pure reflection

SAINT-GOBAIN GLASS DESIGN

SGG MIRALITE® REVOLUTION

An innovative mirror with exceptional purity



The ecological footprint of SGG MIRALITE REVOLUTION has been **reduced** by working on every step of its life cycle.

A product which protects well-being and health, with no toxic substances.

Quality and durability remain unchanged, from the previous SGG MIRALITE EVOLUTION, an outcome of a major Research and Development programme.

Attractive appearance to create light and pleasant living spaces.

■ Green Credentials

Saint-Gobain Glass is the first glass manufacturer to have subjected its products to a full Life Cycle Assessment (LCA). The LCA is verified by an Environmental Product Declaration (EPD), ensuring the quality and reliability of all calculations.

Documentation is available on request.

Visit epd.saint-gobain-glass.com for more information on EPDs.



Application

The properties of SGG MIRALITE REVOLUTION help **enhance internal spaces** (increased light levels, welcoming atmospheres).

It is ideal for use **in the home** and in **professional settings** such as offices, businesses, hotels, restaurants and sports halls.

Possibility to bring new dimensions to rooms:

framed or unframed mirror, wall cladding, items of furniture (table, cupboard door, shelf) and signage.



Range

SGG MIRALITE REVOLUTION

Thickness (mm)	2	3		4		5		6		8			
	3210 x 2000	3210 x 2000	3210 x 2250	3210 x 2440	3210 x 2550	3210 x 2000	3210 x 2250	3210 x 2440	3210 x 2550	3210 x 2000	3210 x 2250	3210 x 2550	3210 x 2250
Clear	•	•	•	•	•	•	•	•	•	•	•	•	•
Extra Clear			•		•		•				•	•	•
Bronze			•		•		•				•	•	•
Grey			•				•				•		•
Green					•	•						•	

Manufacturing sizes:

PLF: 3210 x 6000 mm

DLF: 3210 x 2000/2250/2440/2550mm

SSS: Please contact us for further details.

Tolerance on thicknesses:

2, 3, 4, 5, and 6mm +/- 0.2mm

8mm +/- 0.3mm

Please note:

Only certain sizes and colours are available from stock.

Please contact us for more information or special requests.



A lasting reflection, with a mirror that is safer for health and the environment.

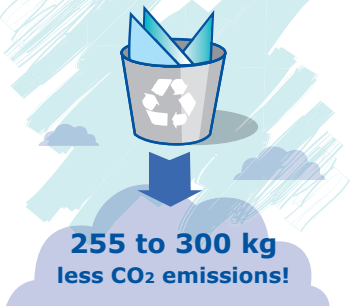


ENERGY AND RAW MATERIALS

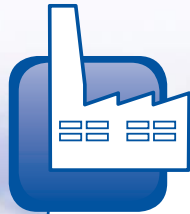
Management of natural resources

- **10% energy reduction** for glass production in 3 years
- **30% recycled glass** in the composition of the mirror

1 tonne recycled glass



255 to 300 kg less CO₂ emissions!



MANUFACTURE

Reduce, Re-use, Recycle (the 3R principle):

an objective which is progressing all the time

- **Reduction of CO₂ and dust emissions** (electro-filters)
- **Re-treatment and Re-use** of water used by 30%
- **Recycling of metal residues** (palladium, silver), rare earth (cerium oxide) and cullet (glass debris)

No hazardous substances, as specified in the **REACH**¹ regulation

The factories have equipment for the **recovery** and **treatment of solvents** emitted during manufacture

Certified factories:
ISO 14001 (environment)
ISO 9001 (quality)
OHSAS 18001 (safety)



LOGISTICS

Minimise the number of miles travelled and CO₂ emissions

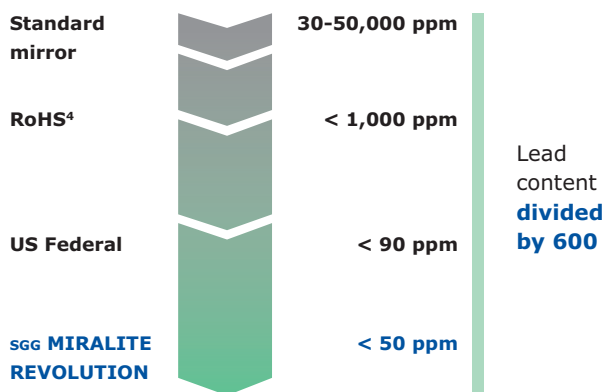
- Saint-Gobain Glass endeavours to be as close as possible to its customers
- Efficient use of fleets to reduce the impact of transportation



ENVIRONMENT AND HEALTH

No lead* added
A minuscule concentration of natural lead
(less than 50 ppm²)

Well below the levels specified by all current regulations



Lead content in dry paint following ISO 11 885, taken by TüV³

Maintain the air quality

SGG MIRALITE REVOLUTION is a design material which is unique due to its **very low emissions of Volatile Organic Compounds (VOC)** and formaldehyde****

	Measurements after 28 days	
	Total VOC (as Toluene equivalent)	Formaldehyde (with DNPH method)
SGG MIRALITE REVOLUTION	≤6 µg/m ³	≤5 µg/m ³
AFSSET ⁵ /AgBB ⁶	<1,000 µg/m ³	10 µg/m ³

Measurements following ISO 16000 taken by EUROFINS

Produced **without copper** and contains **no phthalate**
 (substances present in some plasticisers)



DURABILITY AND QUALITY

Exceptional quality and longevity

SGG MIRALITE REVOLUTION offers an environmentally-friendly alternative, while retaining the technical performance of Saint-Gobain Glass mirrors:

- Excellent durability characteristics
- Far exceeds the requirements of standard **EN 1036⁷**

Type of Test	Standard EN 1036	SGG MIRALITE REVOLUTION
Neutral Salt Spray (NSS) ISO 9227 after 480H		
Maximum corrosion of the edges (µm)	≤ 1,000	50
Cupro-Acetic Salt Spray (CASS) ISO 9227 after 120H		
Maximum corrosion of the edges (µm)	≤ 1,500	250
Water Condensation - Appendix A EN1036 after 480H		
Maximum corrosion of the edges (µm)	≤ 200	0

Exceptional quality and longevity

- SGG MIRALITE REVOLUTION **carries the CE mark** and its performance is constantly monitored

(*) Lead is a powerful anti-corrosive agent traditionally used in paint applied to the back of mirrors. It is potentially dangerous to health and the environment.

(**) Volatile organic compounds (VOC) and formaldehyde are organic chemical substances that can be easily spread at room temperature. With a high concentration indoors, this can cause health problems (eye irritation, breathing problems, etc.)

¹ REACH (Registration, Evaluation and Authorisation of Chemicals): European regulation concerning the safe use of chemical substances.

² ppm (parts per million): Unit used to measure low concentrations of materials. One ppm corresponds to a ratio of 10⁻⁶, i.e. one gram per tonne.

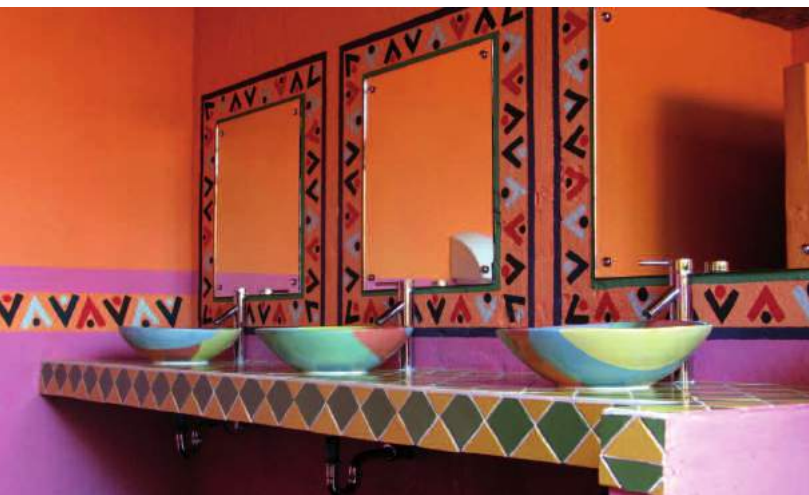
³ TüV (Technischer Überwachungs-Verein): inspection and standardisation German agency certifying the safety and quality of products.

⁴ RoHS: European Directive 2002/95/CE on Restriction of the use of certain Hazardous Substances in electrical and electronic equipment.

⁵ AFSSET: French Agency for Environmental and Occupational Health Safety (France).

⁶ AgBB: Committee for health-related evaluation of building products (Germany).

⁷ EN 1036: European standard concerning the quality of interior mirrors (glass in building).



Processing

Numerous edgeworking options

SGG MIRALITE REVOLUTION is suitable for cutting into all types of geometric or non-geometric shapes. It can be drilled and edgeworked (bevel, chamfer, etc.).

SGG MIRALITE REVOLUTION can be customised with a logo, a sandblasted design, or engraved on the face opposite the coating.

Optical performance

SGG MIRALITE REVOLUTION

Thickness	% LRe minimum
3mm	93
4mm	92
5mm	91
6mm	89

Measurement of reflectance is undertaken in accordance with EN 410, with the angle of incidence of light within 8° of normal.



Manufacturing principles

Paint 2: Protection against abrasion and scratches:
miniscule emissions of Volatile Organic Compounds

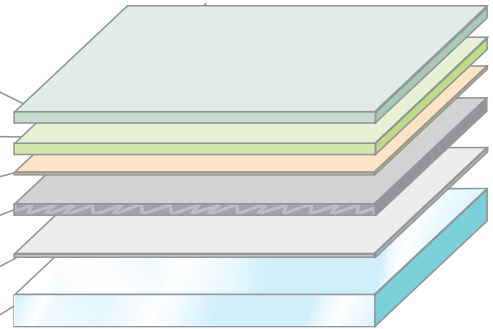
Paint 1: Protection against corrosion:
no added lead (<50ppm)

Post-treatment: Adhesion/durability

Silver: Reflection

Pre-coat: Chemical activation

Glass



Installation

Fixing

• Channel glazing in a frame

Ensure that the frame is clean and dry. Position the mirror on blocks at least 3 mm thick, to raise the mirror and avoid any contact with condensation water that may collect in the frame.

• Fixing pads

Provide suitable fixings. Avoid contact between the glass and metal by using plastic spacers and washers. Attach the mirror without applying excessive pressure.

• Adhesive fixing

Secure the SGG MIRALITE REVOLUTION using mirror adhesive or alcohol-based or oxime-based neutral silicone only*, together with double-sided adhesive pads. Follow the instructions of the adhesive manufacturer.

* If there is any doubt whether the products used are neutral, it is essential to carry out a test on the paint.

Exterior installation

Please contact Saint-Gobain Glass.

Safety

SGG MIRALITE REVOLUTION must be installed in accordance with current national regulations. It is often necessary to use a mirror with a safety film.

In all cases

Irrespective of how the mirror is attached, ensure the following:

- **Install the mirror on a supporting wall that is stable, clean and dry, free from harsh substances and absolutely flat.**
- **Provide sufficient space between the supporting wall and the mirror to ensure good ventilation (5mm for a mirror less than 1m tall, 10mm for a larger mirror).**
- **Leave a space of 1 to 2mm between mirrors when they are installed side by side.**
- **Avoid placing the mirror near a source of heat.**

Maintenance

Do not use harsh products (acid solution, highly alkaline or very abrasive).

Ensure that no residue from cleaning products is left around the edges.





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Distributor

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