

SGG MIRALITE<sup>®</sup> REVOLUTION

*Pure  
reflection*

# 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 favours well-being and health**, with no toxic substances.

**Quality and durability** remain unchanged, a performance which is the outcome of a ma@r Research and Development programme.

**Attractive appearance** to create light and convivial living spaces.



## Light, space and design

### Application

The properties of SGG MIRALITE REVOLUTION help **enhance internal spaces** (increased light levels, conviviality, ambience complemented by original designs...).

It is ideal for use in **the home** (bathrooms, hallways...) and in

**professional settings** such as offices, businesses, hotels, restaurants, sports halls...

**Available in different shapes** to create new dimensions: framed or unframed mirror, wall cladding, item of furniture (table, cupboard door, shelf), signage...



### Range

#### SGG MIRALITE REVOLUTION

| Thickness (mm) | 2             |               | 3             |               |               | 4             |               |               | 5             |               | 6             |               | 8             |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                | 3,210 x 2,000 | 3,210 x 2,000 | 3,210 x 2,250 | 3,210 x 2,440 | 3,210 x 2,550 | 3,210 x 2,000 | 3,210 x 2,250 | 3,210 x 2,440 | 3,210 x 2,550 | 3,210 x 2,000 | 3,210 x 2,250 | 3,210 x 2,550 | 3,210 x 2,250 |
| Clear          | •             | •             | •             | •             | •             | •             | •             | •             | •             | •             | •             | •             | •             |
| Extra clear    |               |               | •             |               | •             |               |               | •             |               | •             |               | •             | •             |
| Bronze         |               |               | •             |               | •             |               |               | •             |               | •             |               | •             | •             |
| Grey           |               |               | •             |               |               |               |               | •             |               |               |               | •             | •             |
| Green          |               |               |               |               |               | •             | •             |               |               |               |               | •             |               |

#### Manufacturing sizes:

PLF: 3,210 x 6,000 mm

DLF: 3,210 x 2,000 / 2,250 / 2,440 / 2,550 mm

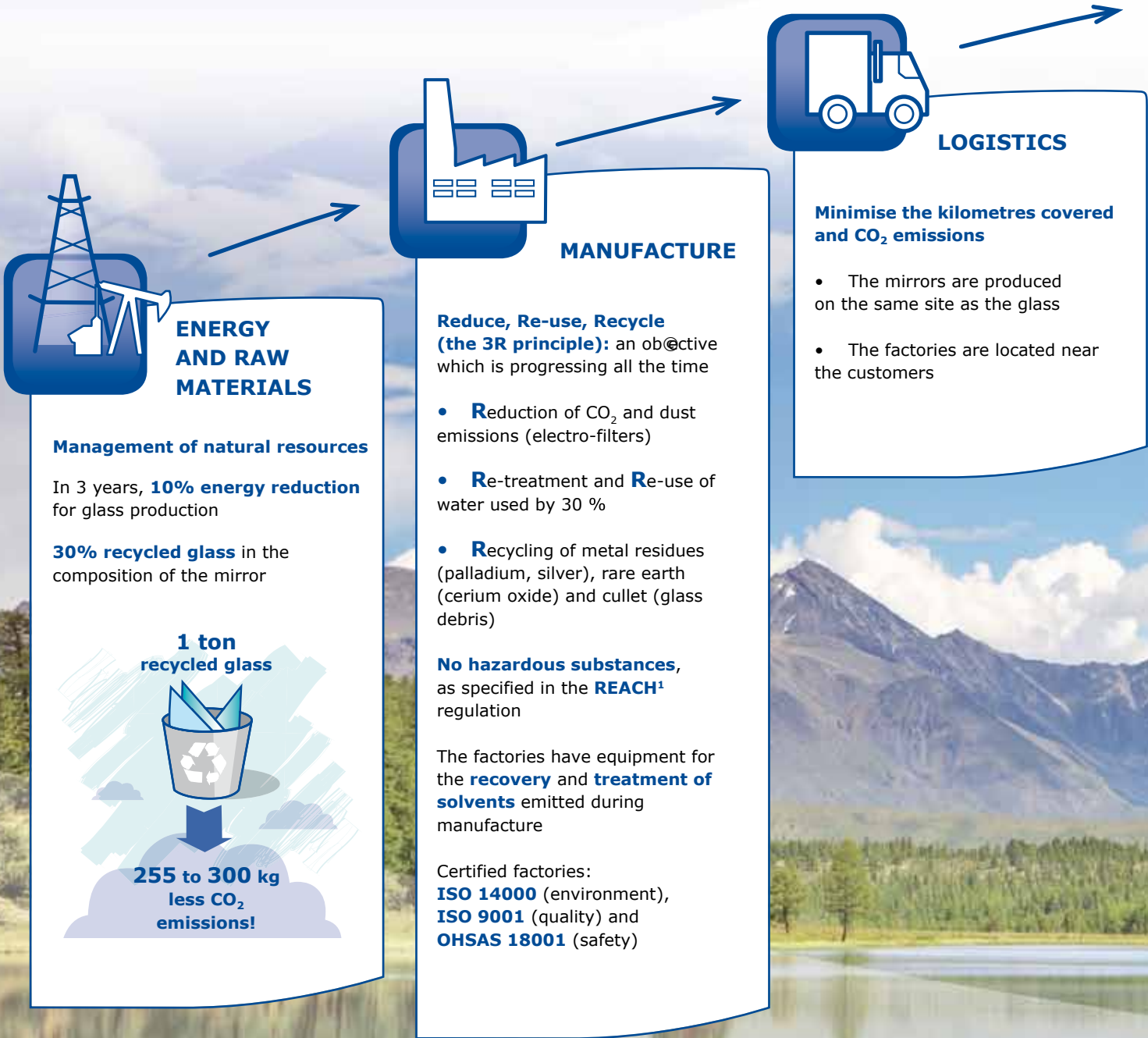
#### Tolerance on thicknesses:

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

8 mm @/ - 0.3mm



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



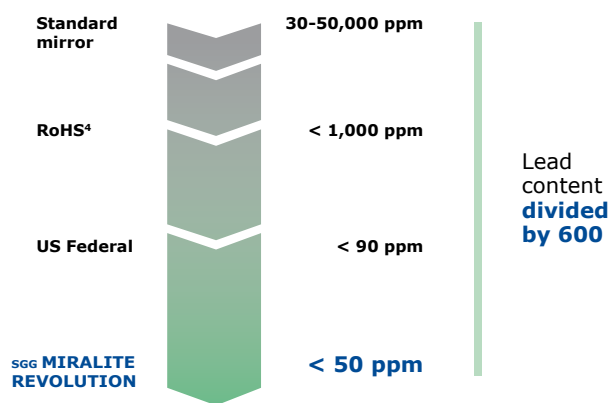




## ENVIRONMENT AND HEALTH

### No lead\* added

It has an infinitesimal concentration of natural lead (less than 50 ppm<sup>2</sup>). It is well below the levels specified by all current regulations



Lead content in dry paint following ISO 11 885, taken by T7V<sup>3</sup>

### Maintain the quality of the air inside

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

|  | Measurements after 28 days           |                                    |
|--|--------------------------------------|------------------------------------|
|  | Total VOC<br>(as Toluene equivalent) | formaldehyde<br>(with DNPj method) |
| SGG MIRALITE REVOLUTION                | ≤6 µg/m <sup>3</sup>                 | ≤5 µg/m <sup>3</sup>               |
| AFSSET <sup>5</sup> /AgBB <sup>6</sup> | <1,000 µg/m <sup>3</sup>             | 10 µg/m <sup>3</sup>               |

Measurements following ISO 16000 taken by EUROFINs

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

(\*) 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.).

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

<sup>2</sup> ppm (parts per million): Unit used to measure low concentrations of materials. One ppm corresponds to a ratio of 10<sup>-6</sup>, i.e. one gram per ton.

<sup>3</sup> TüV (Technischer zberwachungs-Verein): inspection and standardisation german agency certifying the safety and quality of products.

## 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
- Exceeds the requirements of standard EN 1036<sup>7</sup>

| 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                       |

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

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

<sup>5</sup> AFSSET: French Agency for Environmental and Occupational Health Safety (France).

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

<sup>7</sup> 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.).

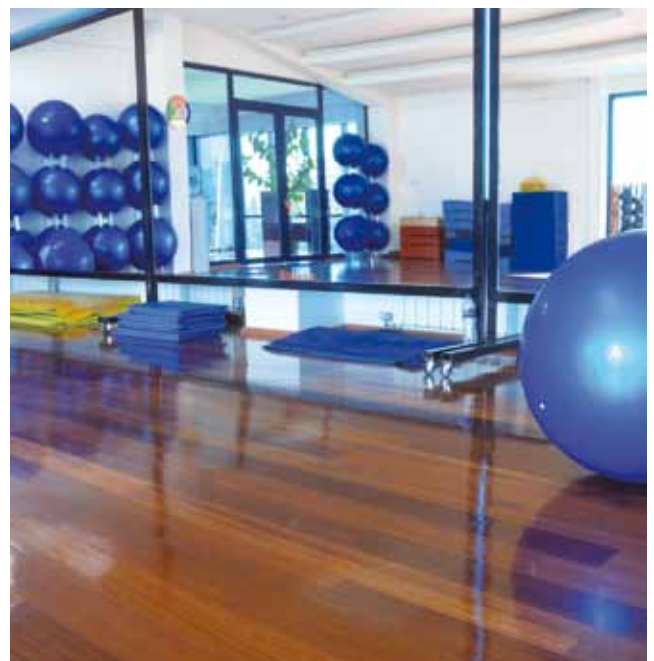
SGG MIRALITE REVOLUTION can be customised with a logo, a sandblasted design, or engraved on the face opposite the coating.

## Optical performance

### SGG MIRALITE REVOLUTION

| Thickness | % R minimum |
|-----------|-------------|
| 3 mm      | 93          |
| 4 mm      | 92          |
| 5 mm      | 91          |
| 6 mm      | 89          |

Measurement of reflectance shall be undertaken in accordance with the principle of EN 410, but with the angle of incidence of the light within 10° of normal.



## Manufacturing principles

**Paint 2:** protection against abrasion and scratches:  
**infinitesimal emissions of Volatile Organic Compounds**

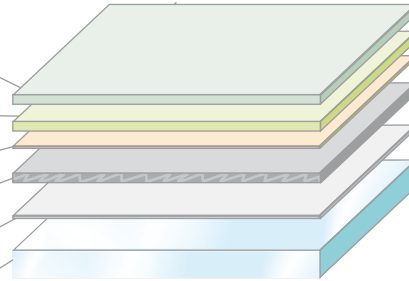
**Paint 1:** protection against corrosion:  
**no added lead (<50ppm)**

**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 might 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

### 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.

### Safety

SGG MIRALITE REVOLUTION must be installed in accordance with current 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 (5 mm for a mirror less than 1 m tall, 10 mm for a larger mirror)
- Leave a space of 1 to 2 mm between mirrors when they are installed side by side
- Avoid placing the mirror near a source of heat (lighting, heating, etc.)





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