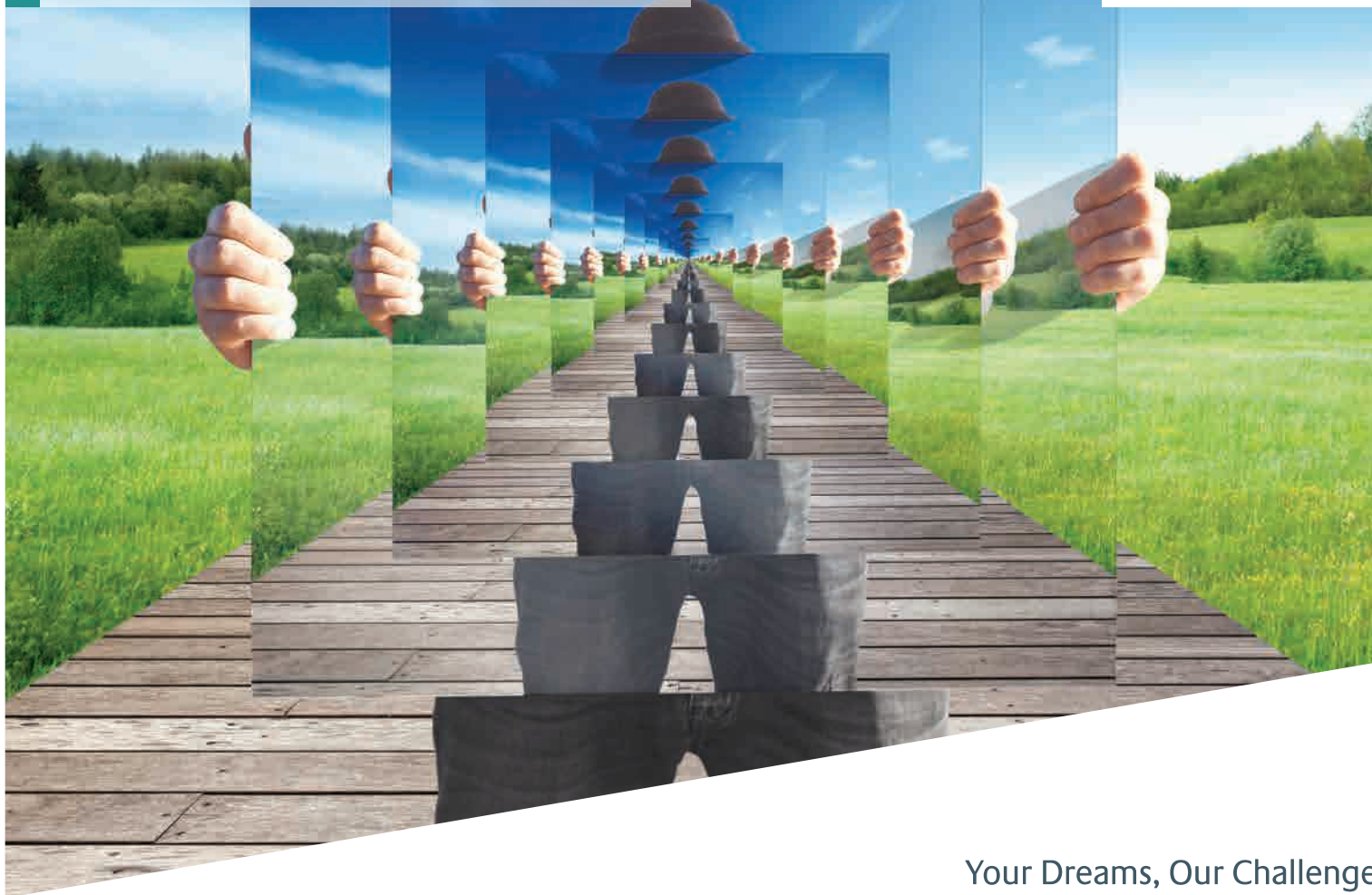


# MIROX 4GREEN & MNGE

Environmental mirrors

**AGC**



Your Dreams, Our Challenge

## AGC Glass Europe introduces...



## ...its environmental mirror range



## MIROX 4GREEN & MNGE

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# Quality, perfection & environmental protection

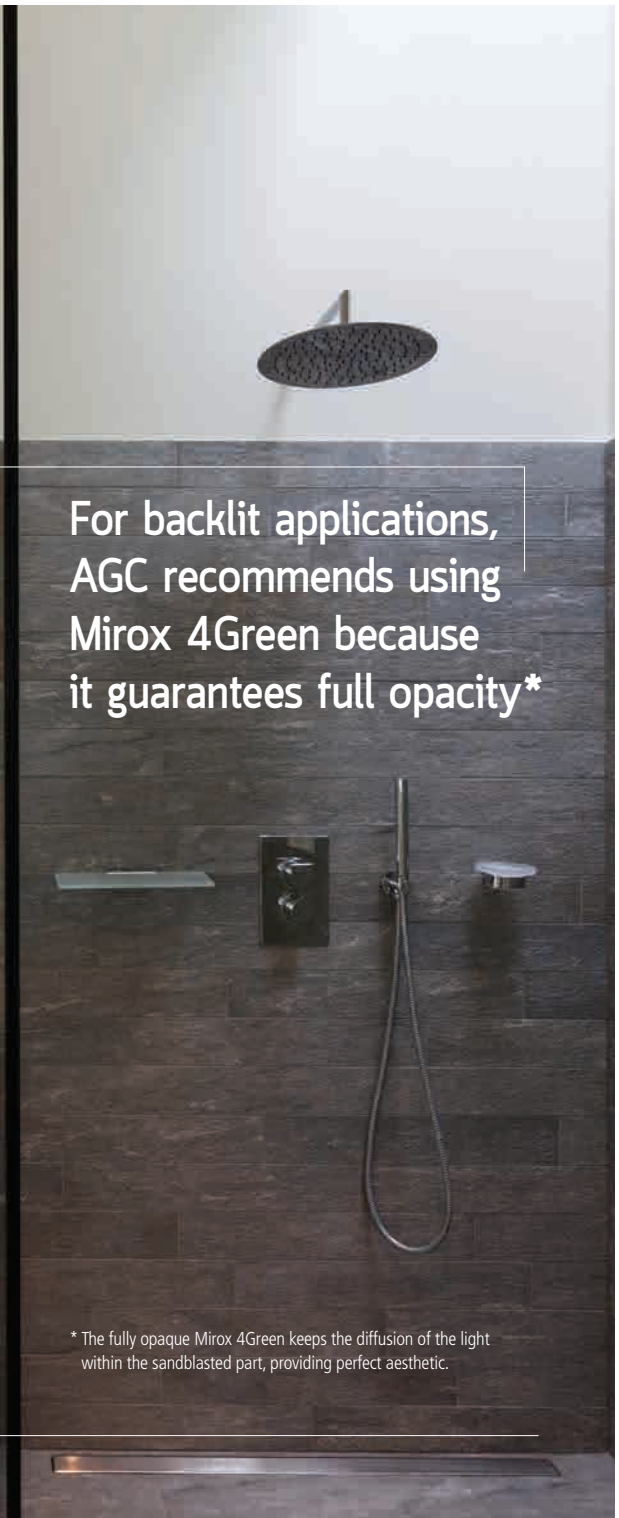
## — MIROX 4GREEN & MNGE —

In line with the company's sustainable approach, AGC offers an enhanced range of ecological mirrors. In addition to the well-known Mirox MNGE, a high-quality standard mirror using low-lead paints, AGC now goes one step further by offering Mirox 4Green, a Premium mirror, that stands out for its use of lead-free paints. Both products deliver the same high-quality performance but Mirox 4Green is ideal for backlit applications thanks to its fully opaque paint.

In addition to eliminating large quantities of toxic products, such as copper, ammonia and lead, AGC puts a great deal of effort into developing mirrors that preserve our indoor air quality. The Mirox range emits very low quantities of volatile organic compounds (VOCs), including very low levels of formaldehyde. Both Mirox MNGE and Mirox 4Green are available in five colours: Clear, Clearvision, Bronze, Grey and Black.



For backlit applications,  
AGC recommends using  
Mirox 4Green because  
it guarantees full opacity\*



\* The fully opaque Mirox 4Green keeps the diffusion of the light within the sandblasted part, providing perfect aesthetic.

# Aiming for peak performance

## MIROX 4GREEN & MNGE

What's so special about it?	What does this mean for you?	Mirox MNGE	Mirox 4Green
<b>Low VOC emissions</b>	<ul style="list-style-type: none"> <li>– Close to zero indoor emissions of volatile organic compounds (A+*, per French Decree No. 2011-321), including very low levels of formaldehyde</li> <li>– Good quality of air inside the building maintained</li> </ul>	✓	✓
<b>Special double-layer paint</b>	<ul style="list-style-type: none"> <li>– Provides excellent anti-corrosion protection for the silver layer outperforming EN 1036 (see information on page 10)</li> </ul>	✓	✓
<b>No added-lead paint</b>	<ul style="list-style-type: none"> <li>– No lead intentionally added</li> <li>– Contains only limited lead contamination (0.004%) from other natural materials used for the production of the paint</li> <li>– Compliant with RoHS** Directive 2011/65/EU</li> </ul>		✓
<b>Opaque paint</b>	<ul style="list-style-type: none"> <li>– Offers superior opacity, which is a key feature when the mirror is backlit using LED strips</li> </ul>		✓
<b>Compatible with AGC's FIX-IN bonding solutions</b>	<ul style="list-style-type: none"> <li>– Facilitates the installation process for the customer or fitter</li> </ul>	✓	✓
<b>Easy to process</b>	<ul style="list-style-type: none"> <li>– Based on the same technology, Mirox 4Green is as easy to process as Mirox MNGE</li> </ul>	✓	✓

\* The A+ category corresponds to the highest level of performance or the lowest category of VOC emissions.

\*\* RoHS: Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



**Mirox MNGE is  
Cradle to Cradle  
Certified™ Bronze.**



**Mirox 4Green is  
Cradle to Cradle  
Certified™ Silver.**

# Superior reflections in your interiors

## — MIROX 4GREEN & MNGE —

What can you use it for? | Be inspired...

**Furniture** – Partitions, tables, shelves, fixed and sliding doors for cupboards and wardrobes, display cases and glass boxes, etc.

**Wall cladding** – Bathrooms, shopping malls, restaurants, schools, hotels, elevators areas, etc.

**Doors** – Sliding doors for furniture

For backlit applications, AGC recommends using Mirox 4Green because it guarantees full opacity.



AGC provides detailed processing and installation guides, as well as a complete range of FIX-IN products and components for glass bonding in interior applications. AGC also provides an Installation Guide and animations explaining how to install glass perfectly. All technical documents can be downloaded from [www.agc-yourglass.com](http://www.agc-yourglass.com). FIX-IN products can be ordered online at [www.agc-store.com](http://www.agc-store.com).





## MIROX 4GREEN & MNGE

### Clear Options



**Clear**  
Normal float base



**Clearvision**  
Highly neutral float base for pure aesthetics

### Coloured Options



**Bronze**



**Grey**



**Black**

### Thicknesses

3, 4, 5, 6 and 8 mm.

### Dimensions

from 2000 x 3210 mm to 6000 x 3210 mm.

Special option... | ...and its benefit

**SAFE+** – For extra safety a film can be applied to the painted side of the Mirox mirror.

- The film has two purposes:
  1. If the glass breaks, the shards will stick to the film, preventing injury and any further damage.
  2. It protects the painted surface of the glass from scratches.

# Technical specifications

The durability of Mirox MNGE and Mirox 4Green mirrors is determined by several accelerated ageing tests in compliance with European standard EN 1036.

			<b>EN 1036 standard</b>	<b>Mirox MNGE</b>	<b>Mirox 4Green</b>
Behaviour	CASS Test <sup>1</sup> ISO 9227	Maximum edge corrosion (µm)	1500	250	
	Neutral salt spray test <sup>2</sup> ISO 9227	Maximum edge corrosion (µm)	1000	50	
	Condensation water test	Maximum edge corrosion (µm)	200	50	
Resistance to adhesives	Oxime			Yes	
	Alcoxy			Yes	
	Rubber			No	
	MS polymer			Yes	
	Acetic Acid			No	
Ecology	Copper protection layer			No	
	Lead content in the paint			< 0.3% (or 3.000 ppm)	0.004% (or 40 ppm)
Cleaning products	Resistance to ammonia			> 7 days	

1. CASS test is conducted for 120 hours (5 days). Edge corrosion is measured on two vertical edges of mirror samples.

2. Neutral salt spray test and condensation water test are conducted for 480 hours (20 days). Edge corrosion is measured on two vertical edges of mirror samples.

What are your processing options?			Special Options
Safety	SAFE+ film	Yes	Mirox MNGE and Mirox 4Green SAFE+ comply with EN 12600 (see "Special options" on page 9).
	Laminating	No	
	Toughening	No	
Cutting	Straight or circular	Yes	See the Processing Guide on <a href="http://www.agc-yourglass.com">www.agc-yourglass.com</a> .
Shaping and edge finishing	Edge grinding	Yes	See the Processing Guide on <a href="http://www.agc-yourglass.com">www.agc-yourglass.com</a> .
	Grinding	Yes	
	Drilling	Yes	
	Notches	Yes	

Other features	Your benefits
Resistance in wet/moist/humid areas	Mirox MNGE and Mirox 4Green can be used indoors in wet/moist/humid areas (bathrooms and kitchens) but cannot be immersed in water. Mirox MNGE and Mirox 4Green must be protected from water infiltrating the back of the glass (use silicones for joints).
Bonding/mounting	Easy and safe to install.

AGC provides technical support for glass processors via its dedicated Technical Advisory Service (TAS). Please make sure to carefully read the Mirox MNGE and Mirox 4Green Processing Guide which details all the steps that must be followed to ensure correct processing and handling. The guide is available at [www.agc-yourglass.com](http://www.agc-yourglass.com).



## AGC GLASS EUROPE, A EUROPEAN LEADER IN FLAT GLASS

Based in Louvain-la-Neuve (Belgium), AGC Glass Europe produces, processes and markets flat glass for the construction industry (external glazing and interior decoration), car manufacture and solar power applications. It is the European branch of AGC, the world's leading producer of flat glass. It has over 100 sites throughout Europe, from Spain to Russia.

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