



— CRADLE TO CRADLE &



GLASS UNLIMITED

A SUSTAINABLE COMBINATION —



“In attaining C2C certification, AGC is an inspiration to others and a leader in positively transforming the construction industry towards using products and materials that are safe and ecologically intelligent. We applaud AGC’s commitment to Cradle to Cradle and a future of abundance.”

William McDonough,
co-founder of Cradle to Cradle

The greening of the construction industry

The EU construction industry is entering a greener era, driven by four major shifts:

- The construction sector is affected by **legislation** on protection of the environment, energy efficiency and well-being.
- **Natural materials** that preserve the indoor health of the building are increasingly preferred.
- **Rising prices** of resources create a preference for energy efficient and recyclable materials.
- **Investments in certified green buildings** are gaining ground and these require the use of environmental friendly products.

AGC and the Cradle to Cradle® (C2C) philosophy: a sustainable combination

C2C is the brainchild of German chemist Michael Braungart and American architect William McDonough. Together, they developed a programme called McDonough Braungart Design Chemistry (MBDC), challenging the business community, the authorities, academia, builders and designers to design products, buildings and houses more intelligently by optimising the use of production processes that make a positive contribution to their environment (for example, energy generation and air pollution reduction).

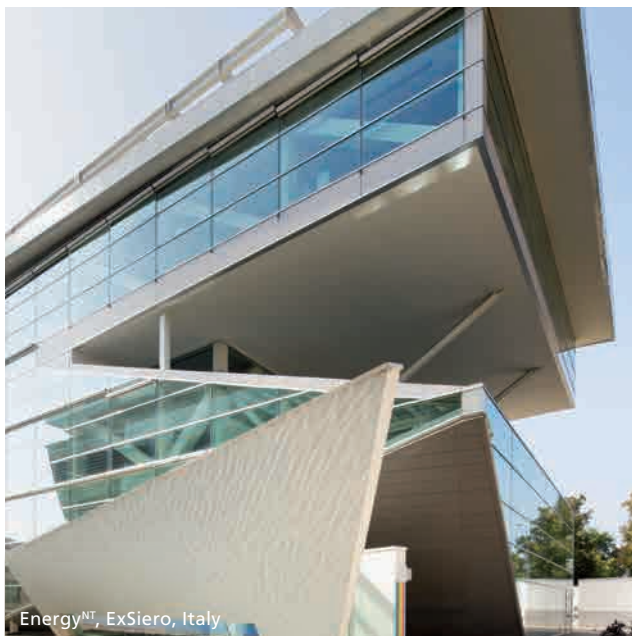
The C2C philosophy imagines a world where there are no resource constraints:

- The concept of waste does not exist anymore – resources can be reused infinitely.
- All materials are safe and healthy because they have been designed with the right ingredients.
- Carbon is no longer the primary concern, because processes are powered with clean renewable energy.

This philosophy is in line with AGC's Going Green approach. AGC is the first and so far the only European glass manufacturer to offer a wide range of products bearing the *Cradle to Cradle Certified^{CM}* label.

C2C: growing recognition for building and interior applications

Over 60% of *Cradle to Cradle Certified^{CM}* products (so far, around 500 products have been certified globally) are for construction and building interiors: floor tiles, glazing, furniture, etc. The *Cradle to Cradle Certified^{CM}* programme for products is gaining recognition internationally, since certified products come from global market leaders and more and more national C2C platform initiatives are being launched in Europe.



AGC's commitment to Cradle to Cradle®

While many certifications address one particular aspect of a product, the C2C Product Standard addresses five categories relating to human and environmental health. In order to achieve certification, a product must meet strict standards in all five categories. AGC exceeds the basic requirements in each of these categories:



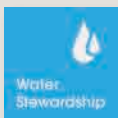
- AGC has a long-standing policy of avoiding the use of dangerous substances in its products and production processes. For instance, if a substance of concern is identified under the REACH regulation, AGC optimises its composition and looks for safer and healthier substitutes.
- AGC's Mirox, Lacobel and Matelac painted glass products for interior decoration present very low levels of volatile organic compounds (VOCs), preserving the indoor air quality (tests were conducted according to ISO 16000 standard).



- Glass is 100% recyclable; AGC glass upcycles about 30% of glass in production.
- AGC constantly improves its packaging technology favouring long-term reutilisation and recycling. The aim is to achieve little or no waste packaging for all products.
- In 2012, AGC recycled or recovered more than 94% of its waste.



- AGC continuously reduces the amount of energy used in production, by further fine-tuning its furnace technology. Today the amount of energy required to produce 1 tonne of flat glass is only 10% of what it was 100 years ago.
- AGC increasingly draws its electricity from renewable sources and installs more photovoltaic systems on its sites.



- AGC has reduced its water consumption by 70% over the last 15 years. Pollution of waste water has also decreased by nearly 60% in the same period.



- AGC Glass Europe is part of the Asahi Glass Company which has a global Corporate Social Responsibility office that publishes an annual report on CSR activities on the AGC Group website. Four shared values guide AGC's activities: Innovation and Operational Excellence; Integrity; Environment and Safety; and Diversity (respect for people and harmony with society). AGC Glass Europe has its own CSR office organized along the same lines.

The added value of *Cradle to Cradle Certified*^{CM} products

The upcoming LEED Version 4 for new constructions, foreseen to move towards an official market launch by the end of November 2013, gives more points to *Cradle to Cradle Certified*^{CM} products. In this new version, *Cradle to Cradle Certified*^{CM} products contribute to up to two points in the Materials & Resources section. This credit encourages project teams to choose "healthier products and materials" in order to minimize the use and generation of harmful substances. Hence, by using AGC's *Cradle to Cradle Certified*^{CM} products, architects and builders are eligible for earning more points.



Lacobel painted glass



Matelux acid etched glass

Silver for AGC!

AGC Glass Europe has achieved *Cradle to Cradle Certified*^{CM} Silver for the following product ranges¹:

1 Float glass and magnetron coatings

AGC Float Glass products

- Planibel (Clear, Bronze, Grey, Green, Azur, Dark Blue, Privablu, Clearvision, Dark Grey)

AGC Magnetron Coated Glass products

- Planibel (I-Top, Light, Top^{N+}, Top^{N+T}, Top 1.0, Tri, Energy^N, Energy^{NT});
- Stopray (Smart 30/20*, Smart 51/33*, Silver, Vision-50, Vision-60**, Vision-50^T, Vision-60^T, Vision-36^T, Neo, Ultra-60**, Ultra-60^{T**}, Ultra-50 on Clearvision, Titanium 37**, Grey 251**);
- Stopsol Phoenix

* Indicates products that have been added on 24th of April 2013

** Indicates products that were new to the 2012-2013 line of products

2 Lacobel, Matelux, Matelac and Mirox

- Mirox 3G and Mirox New Generation Ecological (MNGE) ranges, including SAFE/SAFE+ versions;
- Matelac 12 standard colours, including SAFE/SAFE+ versions;
- Lacobel 25 standard colours, including SAFE/SAFE+ versions;
- Matelux.

¹ Some products are not sold in all countries

Cradle to Cradle Certified^{CM} is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.

There are 5 certification levels: Basic, Bronze, Silver, Gold and Platinum.

With a view to retaining its Silver certification and attaining yet higher levels, AGC has pledged to continuously improve its products and production processes.

For specific product details, visit www.yourglass.com

“70% of our Research & Development budget is spent on developing green products and technologies.”

Marc Van Den Neste,
Vice-President and Chief Technology Officer,
AGC Glass Europe



C2C Silver certificate for AGC's Lacobel, Matelux, Matelac and Mirox



C2C Silver certificate for AGC's float glass and magnetron coated glass

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AGC Glass Europe, a European leader in flat glass

Through its innovative strength in advanced glass technology, its global sales network, its industrial presence spread from Spain to Russia, and its membership to the world's leading producer in flat glass: AGC Glass Europe is "Glass Unlimited".



www.yourglass.com

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