

GARDNER WALKER

Our Commitment to Responsible Manufacturing and the Environment



Gardner Walker's sole manufacturing facility is located in Montreal, Quebec, adjacent to the St. Lawrence River – North America's largest waterway.

Stringent regulations, laws, and permits are in place to safeguard the ecosystem in this region. As a responsible corporate citizen, Gardner Walker is committed to meeting and surpassing these requirements and protecting the natural environment, in particular the water, air, and soil.

Acid-Etched Glass Manufacturing Process

Gardner Walker uses hydrofluoric acid in its **closed-loop** process to manufacture Walker Textures® acid-etched glass and the company's bird-friendly AviProtek® product line. Hydrofluoric acid, also known by the acronym HF, is an aqueous solution that is used in manufacturing industries such as aluminum production and rare metal extraction.

The hydrofluoric acid used in the manufacturing process is fully recovered. When the aqueous solution containing hydrofluoric acid is no longer usable, its pH is neutralized and the fluorides are removed to make it safe for release into the water discharge system. Over the years, Gardner Walker has invested heavily to ensure that all discharges (water, air, solid) are safe for the surrounding environment.

Clean Source of Energy

When it comes to sustainable development, the energy source used in manufacturing building materials is an underrated aspect of material selection. The manufacturing process used at the Montreal plant is powered by electricity from Hydro-Quebec. This energy is produced from hydroelectricity, which helps to meet environmental regulations while minimizing operational costs.

There are many advantages to hydroelectricity. It's a clean, safe, and renewable form of energy that can be produced at scale and distributed efficiently. Furthermore, its production contributes remarkably little to greenhouse gases. Compared to a coal-fired power station, the hydro plant produces **100 times less greenhouse gas** (GHGs) per kilowatt of power. Similar comparisons can be made between hydroelectricity and electricity from fuel oil or natural gas.

Wastewater Management

The island of Montreal lies at the heart of one of North America's most important waterways, the St. Lawrence River. Nearly 80% of Quebec's population lives near the banks of the St. Lawrence and its tributaries - the province's most important source of drinking water. In order to keep this source of water healthy and the ecosystem protected, regulations are in place at various levels of government. The most stringent regulations are found at the municipal level, with the City of Montreal imposing contaminant level limits on waste production from all businesses operating within its territory. The regulations in place require companies to keep contaminants below safe thresholds. **Gardner Walker's contaminant discharge levels are at least 50% to 99% lower than Montreal's accepted thresholds.**

Third-party consultants hired by the City of Montreal collect and analyze water samples and report these results on a regular basis. In addition, City of Montreal officials visit Gardner Walker's facility unannounced to take their own samples and verify these findings.





Air Emission Management

Gardner Walker's plant is located next to residential neighbourhoods. This proximity, combined with a broader concern for the region's forests, makes air quality a top priority when it comes to environmental stewardship.

As with water, governments at various levels have established and implemented regulations to ensure that companies conform to strict emissions standards. Every year, a report on Gardner Walker's atmospheric emissions is submitted to the various levels of government: federal, provincial, and municipal. The city of Montreal is proactive in ensuring compliance with its regulations. The city has several air testing stations in its territory dedicated to measuring pollutants.

All companies located on the Island of Montreal must comply with Bylaw 2001-10 on atmospheric emissions. This by-law requires a permit, and to obtain it, a series of tests must be carried out by an independent laboratory to measure atmospheric emissions.

Consequently, emissions from the production of all products, including those requiring acid etching, must be monitored in accordance with regulation 2001-10. Furthermore, the city of Montreal also imposes legislation for the disposal of contaminants in the air under the "rule 90". **Gardner Walker's emissions of these substances are 99% below the accepted limits.**

Solid Waste and Hazardous Material Management

The manufacture of glass products such as acid-etched glass generates solid waste. Gardner Walker has set up a process for the neutralization and treatment of all solid waste generated by its manufacturing process, in accordance with applicable municipal regulations. Following treatment, the majority of the solid waste is suitable for disposal in landfills.

A small amount of solid waste remains hazardous. These materials are collected in separate drums and sent out for recycling.



Glass & Mirror Recycling and Reuse

Gardner Walker's glass cullet and scraps, such as acid-etched glass and mirror, are collected in bins and sent for recycling. **No Gardner Walker glass or mirror waste is sent to landfills.**

Glass and mirror are disposed of in accordance with good glass industry practice. For further information, please consult the technical document on flat glass recycling published by the National Glass Association (NGA).

Full Disclosure Policy

Gardner Walker has embraced the transparent manufacturing movement since its earliest days. In 2017, Gardner Walker was the first company to publish EPD (Environmental Product Declarations) and HPD® (Health Product Declarations) on acid-etched glass, acid-etched mirror, and bird-safe glass.

An EPD is a standardized report describing the potential environmental impacts of a product based on life-cycle assessment criteria in accordance with the ISO 14025 protocol, whereas an HPD® is a declaration that lists a product's ingredients and their effects on health. In both cases, analyses, reports, and document validation are carried out by external firms.

Environmental data sheets for the following products are available on the Gardner Walker website.

- Bird-safe glass
- Acid-etched glass
- Acid-etched mirror

For full versions of EPD and HPD®, please contact your architectural manager.

Responsible Citizenship

Gardner Walker works hard to minimize its ecological footprint. As depicted herein, Gardner Walker adheres to the city of Montreal's strict anti-pollution requirements. Furthermore, it goes beyond these requirements to minimize its environmental impact and practice transparent, responsible manufacturing. Here are some of the ways that Gardner Walker is protecting the waterways, air quality, and soil of its surrounding environment.

- **Contaminants in water runoff are 50% - 99% lower than accepted thresholds.**
- **Contaminants in air emissions are 99% lower than accepted thresholds.**
- **Operations are powered by hydroelectricity, which produces 100 times less greenhouse gas per kilowatt of power than coal.**
- **EPD and HPD® give full transparency into product life cycles.**
- **Solid and water waste are purified, reclaimed, or recycled.**

At Gardner Walker, being a good citizen is a source of pride, and that means showing respect to the planet and future generations.