

FACT SHEET

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Entreprises
Québec

ABRASIVE GLASS:
A 2ND LIFE FOR GLASS COLLECTED
VIA CURBSIDE RECYCLING



MARKET OUTLETS FOR ABRASIVE GLASS

Sandblasting is an industrial cleaning technique that uses compressed air to propel an abrasive through a nozzle onto the surface under high pressure.

Glass recovered via curbside recycling can be ground up and used as an abrasive to polish rough surfaces or remove contaminants on a surface that will be subsequently repainted. Unlike other types of abrasives, recycled glass produces a whiter result, a cleaner finish and does not contain heavy metals, which means that the product is safer for workers to handle.

TARGET MARKET AND POTENTIAL POOL OF CUSTOMERS

Customers for abrasives are mainly marine-based industries, oil refineries as well as bridge maintenance and repair companies. These prosperous industrial sectors are located in the northeast U.S. and Canada, where there are at least 12 naval bases, 15 refineries and 7 major sandblasting companies. Public works departments are also potential contract originators who may require recycled glass abrasives to clean graffiti, monuments as well as stone or metal infrastructures, or to strip paint.

Excluding public works departments, actual market outlets for abrasives in those three industrial sectors in Quebec, Ontario and northeast United States alone use 152,000 t/year of glass abrasives.



MARKET

Given the 152,000 t of glass abrasives used by the above three industrial sectors, the market is worth between \$41 million and \$53 million/year at the current average distributors' sale price ranging from \$270 /t to \$350 /t¹.

COMPETING MATERIALS

- Silica
- Slag

SUPPLIERS OF ABRASIVE GLASS

Currently, there are 14 main suppliers of glass abrasives in North America, two of which are in Quebec and four in other Canadian provinces.

The abrasives market is expected to continue its strong growth, estimated at 3.8%/year until 2019.

POSITIVE MARKET PENETRATION INDICATORS

- Well-known abrasive in the sandblasting industry, which will facilitate and drive marketing and development.
- Safe abrasive, without free silica or heavy metals.



- Abrasive that produces a whiter result and cleaner finish than mineral or slag-based abrasives.
- Sought out by the market to replace other materials:
 - Slag is banned in several American States due to heavy metal content
 - Silica is classified by the OSHA as a material that presents a risk to health
- Glass abrasives are on several North American government organizations' QPLs (qualified products lists).

¹ Amounts indicated are in Canadian dollars.

TECHNICAL CRITERIA AND CERTIFICATION

CERTIFICATIONS

There is no mandatory certification for glass abrasives.

However, compliance with the two following standards is recommended in order to be included on Qualified Products Lists (QPLs):

- **SSPC-AB1 Mineral and Slag Abrasives:** standards developed by the Society for Protective Coatings to ensure the protection of metal structures
- **MIL-A-22262 Abrasive blasting media – Ship Hull blast cleaning:** standards developed by the American army

All product compliance testing must be carried out according to ASTM International standards.

CRITERIA

Criteria to meet standards vary according to the surface on which the abrasive is used, required cleaning frequency or the purpose for which the surface to be stripped will be used. The most common criteria are:

- Contamination rate
- Humidity rate
- Proportion of chloride
- Required shape
- Granulometry

