

Silica Precipitate



Converting Waste Glass into Products of High Economic Value

A PROCEDURE THAT PAYS

A technical-economic study showed in 2010 the value of converting coloured and mixed glass into silica precipitate—a product of high economic value used in tires, paint, and even toothpaste—developed by CRIQ in recent years. In light of these results, CRIQ now provides industry partners with an opportunity to continue the study and implement it at the pilot and commercial stages.

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WHAT THE STUDY FOUND

Profitable

- Profitable starting at 10,000 T of silica precipitate produced per year. For this quantity, annual income is an estimated \$13 to \$16.7 million.
- Silica precipitate sells for \$1,300 to \$1,670 per ton.
- By way of comparison, clean glass sells for only \$142 per ton while coloured glass is worthless.
- 2 tons of glass produce 1 ton of silica precipitate.

Potential Annual Market

- Canada: 22,000 T
- United States: 191,000 T

WHY USE THE PROCEDURE?

- Uses all types of glass (colourless, coloured, and mixed).
- Transforms waste into a product of high economic value.
- Currently there are no silica precipitate manufacturers in Canada, even though the North American market is enormous.
- It's profitable.

POTENTIAL USES

- Tires and rubber
- Cosmetic and hygiene products
- Food and animal feed
- Paint

For more on converting waste glass into silica precipitate, contact:

Guy Genest,
Business Development Coordinator
333 rue Franquet, Québec City, Québec
G1P 4C7
418-659-1550 / 800-667-2386, ext. 2879

THE ROAD AHEAD

- Optimize the procedure by varying all parameters.
- Characterize the two products obtained (silica precipitate and secondary material).
- Research applications for the secondary material and optimize the procedure.
- Implement a pilot project.