Polystyrene recycling on the rise

Cirko, Cathy . Solid Waste & Recycling 13.5 (Oct/Nov 2008): 20-22,24.

ProQuest document link

ABSTRACT (ABSTRACT)

W.R. Grace is a worldwide chemicals and materials company with annual sales of over $3.1 billion and employees in more than 40 countries. Its Canadian operation, Grace Canada, includes a polystyrene recycling facility located in Ajax, Ontario. The recycling operation started in 1997, with the recycled polystyrene being used in the manufacture of the company's Monokote fire protection material. The recycled polystyrene is mixed with virgin polystyrene (along with other cement and cellulose) before being applied as a spray insulating foam to reinforce steel. To date, the company's three North American polystyrene recycling facilities (which include the one in Ajax, along with separate facilities in Alabama and California) have recycled over 32 million kilograms of polystyrene. The polystyrene that is recycled is principally the white foam cushion packaging of the type used for packaging electronics and other consumer durable goods.

"In the Ajax facility alone, we have the capacity to recycle more than 1.8 million kilograms of polystyrene," explains Debbie Fearn-Wright, Senior Purchasing Manager, Grace Canada Inc. "We're currently recycling around half a million kilograms a year so there is a lot of room for expansion."

"We're waiting for the City of Toronto," he says. "We spent a lot of money to expand our recycling capacity to be able to handle Toronto's polystyrene. We've got everything in place and are just waiting for the go-ahead."

FULL TEXT

Canadian municipalities interested in increasing plastic waste diversion have some good news on hand, namely that markets for polystyrene packaging are on the rise. Two existing Ontariobased markets are expanding significantly and interest in polystyrene recycling is popping up across the country.

Grace Canada

W.R. Grace is a worldwide chemicals and materials company with annual sales of over $3.1 billion and employees in more than 40 countries. Its Canadian operation, Grace Canada, includes a polystyrene recycling facility located in Ajax, Ontario. The recycling operation started in 1997, with the recycled polystyrene being used in the manufacture of the company's Monokote fire protection material. The recycled polystyrene is mixed with virgin polystyrene (along with other cement and cellulose) before being applied as a spray insulating foam to reinforce steel. To date, the company's three North American polystyrene recycling facilities (which include the one in Ajax, along with separate facilities in Alabama and California) have recycled over 32 million kilograms of polystyrene. The polystyrene that is recycled is principally the white foam cushion packaging of the type used for packaging electronics and other consumer durable goods.

"In the Ajax facility alone, we have the capacity to recycle more than 1.8 million kilograms of polystyrene," explains Debbie Fearn-Wright, Senior Purchasing Manager, Grace Canada Inc. "We're currently recycling around half a million kilograms a year so there is a lot of room for expansion."

Picture frames are one of several end-products made from recycled polystyrene.

Enlarge this image.

Until recently, the polystyrene being recycled at the Ajax facility was primarily sourced from industry sectors, such as automotive. Polystyrene packaging was removed from durable products and captured for recycling by Grace Canada. Ontario regulations require the recycling of this packaging from manufacturing firms.
Over the last couple of years, Grace Canada has worked with EPIC and various Canadian municipalities (Town of Markham, Sault Ste. Marie, Brockton-Hanover, Northumberland County, and City of Toronto) to implement depot collection programs for cushion polystyrene packaging.
"The municipal depot collection programs are going nicely," says Fearn-Wright. "The quality of the post-consumer material being collected is quite comparable to our post-industrial material."
More municipalities have since expressed interest in working with Grace Canada to divert polystyrene from landfill.

'The success of each program is different with each municipality," says Fearn-Wright. "It's largely dependent on how hard the municipalities want to advertise the availability of the program to their residents. Although the program is tailored to Grace Canada, I am more than willing to work with them to find the best possible system."
And according to Fearn-Wright, there is no fear that Grace Canada won't be able to accommodate the increased volume of EPS.

Changes from last year to this year

(based on municipal call data from 2006 to 2007)

MATERIALS	2006	2007	% Change in BB costs
Glass (F&C)	$ 163.00	$ 182.00	10%
Aluminum cans	$(606.00)	$(842.00)	–28%
Steel	$ 177.00	$ 167.00	–6%
PET	$ 745.00	$ 842.00	12%
OCC	$ 358.00	$ 399.00	10%
TOTAL PACKAGING	**$/tonne**	**$/tonne**	
Gross	$ 499	$ 543	8%
Revenue	$ 156	$ 171	9%
NET COST	$ 343	$ 372	**8%**
TOTAL SYSTEM	**$/tonne**	**$/tonne**	
Gross	$ 276	$ 305	10%
Revenue	$ 120	$ 124	3%
NET COST	$ 156	$ 181	**14%**
TOTAL $M SPENT	$M	$M	
PACKAGING	120.8	136.4	**11%**
TOTAL	133	157	**15%**

Enlarge this image.

"We figure that Grace Canada can handle as much expanded polystyrene as the municipalities can send out way," she concludes.

A picture is worth ....

Polystyrene food-service packaging has been available in Ontario for the last 20 years. The primary recycling facility is now under new ownership by the Canadian Polystyrene Recycling Alliance (CPRA), a vertically-integrated operation headquartered in Port Hope, Ontario. This group of companies includes Polyframe Moulding Inc. and North American Moulding, which have polystyrene recycling capabilities and extrusion lines, along with Picture Depot, which assembles the extruded material into picture frames and decorative mouldings. CPRA remains committed to using its North American recycling and manufacturing facilities to compete against offshore markets. The company's products are made from 100 per cent recycled polystyrene.

"We accept all types of post-consumer polystyrene at our Mississauga CPRA facility," explains Sam Alavy, CEO and Owner of CPRA. "We pay $75 per tonne for baled material and we accept unbaled material at no charge."

Alavy 's group of companies began in 1993 and currently employs over 200 people. The picture frames and decorative mouldings are sold primarily in North America, with 50 per cent of the sales emanating from the United States.

"We've just increased our polystyrene recycling capacity at CPRA because the demand for our products is on the rise," says Alavy, who adds that he also has added recycling capability in his Port Hope facility so the operation is far from working at capacity.

Alavy is encouraged by the positive response shown by Canadian municipalities, but says there is still a lot more material out there that isn't getting captured.

"We're waiting for the City of Toronto," he says. "We spent a lot of money to expand our recycling capacity to be able to handle Toronto's polystyrene. We've got everything in place and are just waiting for the go-ahead."

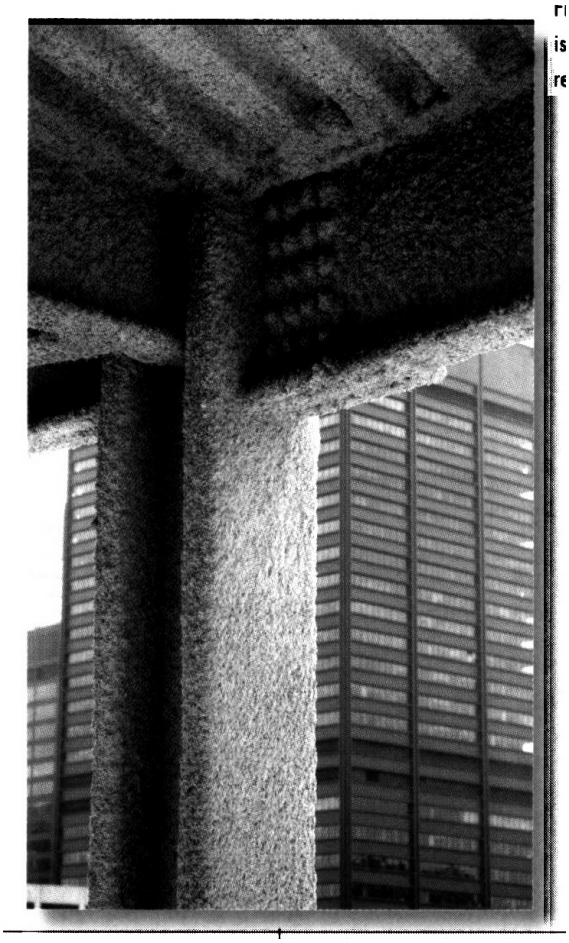
Projects in the works

In addition to the polystyrene recycling projects already mentioned, there are several other programs across the country that have programs still in the planning stages. In the Province of Quebec, for example, large generators of polystyrene cushion packaging have expressed interest in recycling polystyrene. EPIC has conducted a survey of equipment that could densify the material and reduce shipping costs to recycling facilities. Progress is expected later this year.

Out west, the Alberta Plastics Recycling Association (APRA), in conjunction with EPIC, is exploring opportunities to establish pilot post-consumer expanded polystyrene recycling programs in two separate Alberta communities. Similar ideas are also taking place in British Columbia, where EPIC is looking for a major retailer to pilot a cushion packaging collection program.

The fact that there are growing markets for polystyrene bodes well for Canadian municipalities. One, it can help lower tipping fees. Two, it can help satisfy those ever-diligent householders intent on doing their part to reduce our environmental footprint.

Polystyrene is currently being recycled into a broad assortment of products, including picture frames, coat hangers, seedling trays, cornices and mouldings, base boards, office supplies and fire-retardant materials.



Enlarge this image.

Canadian municipalities interested in implementing depot collection programs for expanded polystyrene are invited to visit the EPIC web site at www.plastics. ca/epic to download the "Best Practices for the Depot Collection of Polystyrene Cushion Packaging" guide, which was developed in partnership between Grace Canada and EPIC.

Sidebar

"The polystyrene that is recycled is principally the white foam cushion packaging of the type used for packaging electronics and other consumer durable goods."

Enlarge this image.

AuthorAffiliation

Cathy Cirko is the Vice President of Environment and Health, Canadian Plastics Industry (CPIA) and Director General of the Environment and Plastics Industry Council (EPIC). Contact Cathy at ccirko@cpia.ca

DETAILS

Subject:	Polyethylene; Recycling; Chemical industry; Packaging industry
Location:	Ontario Canada
Company / organization:	Name: W R Grace &Co; NAICS: 325188, 325520, 325998, 326140
Publication title:	Solid Waste &Recycling

Volume:	13
Issue:	5
Pages:	20-22,24
Number of pages:	4
Publication year:	2008
Publication date:	Oct/Nov 2008
Section:	RECYCLING
Publisher:	Business Information Group
Place of publication:	Toronto
Country of publication:	Canada
Publication subject:	Environmental Studies--Waste Management
ISSN:	12060879
Source type:	Trade Journals
Language of publication:	English
Document type:	Feature
Document feature:	Photographs
ProQuest document ID:	212388479
Document URL:	http://ezproxy.rowan.edu/login?url=https://search.proquest.com/docview/212388479?accountid=13605
Copyright:	Copyright Southam Inc. Oct/Nov 2008
Last updated:	2012-01-27
Database:	ProQuest Central

LINKS

Linking Service

Copyright © 2017 ProQuest LLC. All rights reserved.

Terms and Conditions Contact ProQuest