



Canada: Plastics and Resins Industry

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Madellon Lopes
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Summary

The Canadian Plastics industry in Canada is ranked 4th overall of all manufacturing industries behind Motor Vehicles, Petroleum Refineries and Motor Vehicle Parts. It is also ranked #1 by employment. Valued at an estimated US\$30.6 billion in 2007, the plastics industry encompasses four main segments as follows: processors (manufacturers of plastic products); resins; tool, die and mold makers; and machinery. In Ontario, the plastics and resins sector is the 2nd largest industry after the auto sector, and Ontario is the 3rd largest plastics producing region in North America (US\$ 24.7 billion in 2007). It accounts for 66 percent of Canada's shipments of plastic products, 61 percent of raw materials and machinery shipments and 85 percent of mold shipments; while retaining an 81 percent share of U.S. plastics imports. The Canadian plastics market, as a whole, will remain relatively stagnant, slowing slightly over the next year, with certain sub-sectors estimated to show growth at 2-3 percent - e.g. plastics resins and plastics machinery.

Market Demand

Overall, demand for U.S. manufactured plastic products will improve in 2008. This upturn is predicated on several industry factors, most notably a drop-off in Canadian production, lack of support from the 2008 Federal Budget, and the emerging need for "green" technologies and subsequent research and development (R&D).

According to Statistics Canada's *Business Conditions Survey*, reports of production impediments by Canadian manufacturers in 2007 increased by 8 percent from 2006. The rapid appreciation in the value of the Canadian dollar, along with higher energy costs, skilled-labor shortages, and strong competition from emerging economies such as China and India, have had a negative impact on profitability in many parts of the manufacturing sector. In response to these challenges, many manufacturers have had to take a variety of measures to adjust to the changes. The responses include lowering labor costs, increasing inputs/processing abroad, increasing investment in machinery and equipment, raising selling prices, reorienting production and increasing financial hedging. As a result, total industry production dropped 1 percent from 2006 to US\$33.8 billion, and is forecasted to decrease an additional 2 percent in 2008.

Moreover, despite hopes to the contrary, the 2008 Federal Budget did not supply plastics manufacturers with the relief necessary to increase production. The 2008 Canadian Federal Budget (released February 2008) fell short of meeting the recommendations outlined by the May 2006 House of Commons Standing Committee on Industry, Science and Technology report *Challenges Facing the Canadian Manufacturing Sector*, namely the inability of small Canadian companies – who are the majority in the industry - to match R&D rates of U.S. competitors. Though the Budget makes some progress via the Accelerated Capital Cost Allowance and Scientific Research and Experimental Tax Credit, its measures do not resolve the obstacles

facing the plastics industry. In the past, American imports have grown steadily while Canadian domestic production grew on parallel. The current inability of smaller Canadian firms to compete in research and development with larger, well-funded American businesses has resulted in a reallocation of funds by several domestic manufacturers, engendering a decline in overall production. Consequently, domestic demand for manufactured plastic products will abound going forward.

Given the current production environment within the plastics manufacturing sector, prospects for U.S. imports in the Canadian market will not only remain strong, but also improve in response to the aforementioned decline in domestic production and the resulting rise in demand. Despite the appreciation of the Canadian dollar and current slowdown of the U.S. economy, American plastics manufacturers will find opportunities to increase imports as demand adjusts as a corollary to decreased domestic production. Demand is slated to grow 1-2 percent through 2008, with American plastic imports to Canada expanding 3 percent to a little over US\$11.6 billion (roughly 75 percent of total plastics imports).

At present, the Federal and Provincial governments alike are undertaking several environmental sustainability based initiatives, such as Natural Resources Canada Office of Energy Efficiency's Canadian Industry Program for Energy Conservation (CIPEC), ecoEnergy Retrofit Incentive for Buildings, Federal Building Initiative, and Ontario BioAuto Council Commercialization Fund. As such, there exists a burgeoning market for "green" technologies within the plastics sector. While the Federal government has earmarked \$250 million for research and development in Canada's manufacturing industries over the next five years, the plastics sector will receive only a small proportion. Subsequently, given the distinct advantage held by US-based companies in R&D, combined with the aforementioned decline in domestic production and lack of R&D funding, American plastics manufacturers will find an increased demand for their R&D expertise and environmentally friendly products. Demand will be greatest within the packaging, construction, and automotive sub-sectors, Canada's three largest plastics end-use markets.

While demand for plastics as a whole will increase slightly due to the decline in local production, the synthetic resin industry has experienced significant growth, with shipments amounting to roughly \$11 billion in 2007, up from the previous year. Demand for plastic resins is projected to grow slightly ahead of the industry average at 3-4 percent through 2008.

Market Data

	2006	2007	2008 (Estimated)
Total Market Size	30,851	30,604	30,298
Total Local Production	34,096	33,755	33,080
Total Exports	18,479	18,571	18,385
Total Imports	15,234	15,310	15,463
Imports from the U.S.	10,739	11,276	11,614

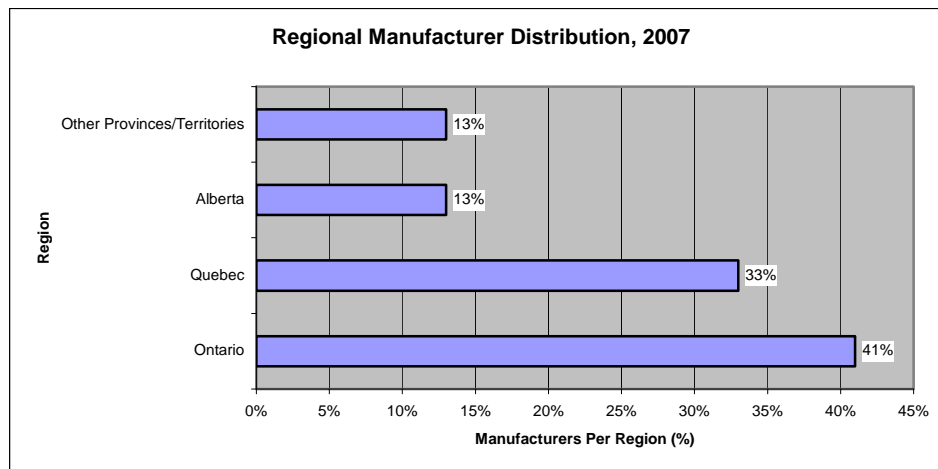
(In Millions of U.S. Dollars. Exchange rate: \$1.00 US = \$1.00 CDN)

At the close of 2007, the United States represented 74 percent of total Canadian plastics imports at roughly US\$11.3 billion. This demonstrates a 3 percent increase from 2006, and is in-line with industry trends, which forecast a further 2 percent accrual in 2008.

From consumer to industrial products, plastics are used in virtually every industry sector and continue to displace other materials such as paper, glass, metal, steel and concrete. The largest segment for plastic usage is the packaging industry (34 percent), followed by the construction industry (26 percent) and the automotive industry (18 percent). Electronics account for 12 percent, furniture around 5 percent and other industries 5 percent.

Comprised of more than 2,405 firms and 118,000 employees, the Canadian Plastics industry encompasses four main segments with approximate values as follows: Resin producers (\$5.2 billion or 17 percent), machinery manufacturers (\$612 million or 2 percent), processors (manufacturers of plastic products – \$23.26 billion or 76 percent) and tool, die and mold makers (\$1.53 billion or 5 percent).

Plastics manufacturers are concentrated within or near Canada's most densely populated areas, with 41 percent located in Ontario, 33 percent in Quebec, and 13 percent in Alberta. Plastics manufactured for use in the automotive and construction industries are primarily located within Ontario and eastern Quebec, particularly thermoplastic and thermoset resins derived from natural gas and oil. Synthetic resins and rubber found in packing products retain a nation-wide production base, employing 7,180 people in 103 establishments, with shipments of roughly \$11 billion. In total, the plastics industry in Canada represents almost 5 percent of Canada's GDP.



It should be noted that while the U.S. continues to retain a majority share of Canadian plastics imports, foreign competition in this sector is growing rapidly. In particular, China has made significant inroads into Canada's plastics market over the last four years, especially within the manufacturing sub-sector where its share has grown 4.24 percent. China's labor costs are, on average, about 1/40th of those in Canada, and they provide China with a comparative advantage in manufacturing labor-intensive products. China has also become an integral part of manufacturers' global supply chains. The United States is also facing low cost and high value competition from other emerging economies, such as South Korea

Best Prospects

Prospects pertaining to imports for the plastics market remain high within the traditional sectors. However, within these sectors, the implementation of "green", environmentally friendly

technologies represents an increasing portion of the market, with inroads into each major sector. Given current public support for environmentally sustainable initiatives and improving Federal and provincial government(s) funding for “green” projects, the automotive, construction/architectural, and packaging industries are seeking to employ this technology in their new products. With the Canadian capacity for R&D on the decline, the introduction of new, as well as improvement upon current environmentally sustainable technologies will fuel new prospects for American imports.

Yet, until the aforementioned “green” technologies realize a greater stake in the market, traditional plastic products will remain in demand. With plastic adaptations now replacing metal parts in automobiles, prospects for plastic manufacturers remain high in Canada’s automotive manufacturing market, namely in Ontario – presently North America’s largest automobile manufacturing region. Moreover, as urban centers expand into Canada’s vast rural areas, while continuing to retrofit aging metropolitan locations, prospects for plastics within the construction/architectural sector are strong, both in building materials and machinery.

It should also be noted that in May 2007 the Ontario government unveiled a plan for the 50 percent reduction of plastic bag use by 2012. This ban will impact clear plastic film manufacturers, significantly reducing the consumer base in Ontario. At the same time, the ban will engender new opportunities for biodegradable plastics manufacturers whose products dissolve more rapidly and are therefore of less danger to the environment.

More specifically, best prospects include:

- Lightweight heat-resistant plastic parts for automotive, electrical/electronic, aerospace, medical device and consumer electronics components.
- IML (In Mold Labeling), PET (polyethylene terephthalate) bottles, multilayer film applications and smart packaging, as well as approaches to going green.
- Non-structural building materials, such as windows, siding, roofing systems, fencing panels and PVC sheets to replace concrete in backer boards or window borders, as in WPC (wood-plastic composite) decks.
- Municipal water pipe: large diameter (1,000mm) polyethylene pipe and 4.5 inch PVC water mains.
- Biodegradable plastics products, such as those used in biodegradable shopping bags.
- Products that integrate natural-based polyols as a replacement for petroleum-based polyols.

Key Suppliers

Alpha/Owens Corning
(USA)
KoSa (USA)
Invista (USA)

Basell (Netherlands)
NOVA Chemicals
(Canada)
3M Canada Inc.

Bordon Chemical (USA)
Oxy Vinyls (USA)
Dow Chemical (USA)
Petromont (Canada)

DuPont Dynea (USA)
PTT Poly Canada
(Canada)

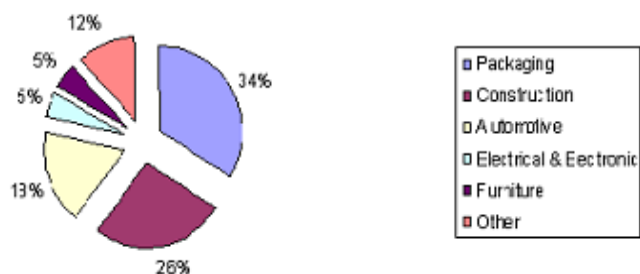
Hexion Oil (USA)
Reichmont (USA)

Imperial Oil (USA)
Royal Group (USA)

Prospective Buyers

Demand for plastics is driven by the end-users located within the industry's primary sub-sectors: packaging, construction and automotive. Within these sub-sectors, the catalysts for demand are relatively similar. The emerging trend within the plastics industry is the increased implementation of "green" technologies into plastic manufacturing. Based on public and private interest in environmentally sustainable products, end-users are finding the marketability of their product lines improve when considered environmentally friendly. Backed by Federal and provincial government initiatives, Canadian manufacturers have made headway into this burgeoning market; however, present funding does not allow manufacturers to meet demand.

Canada: Plastics End-Use Markets, 2007



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Insofar as plastic packaging is necessary in a vast array of industries, demand in itself will grow to

parallel the needs of end-users. Driving new demand will be the increased need for biodegradable and easily recyclable plastics in the packaging sub-sector. In-line with private and public interests to reduce costs and waste, such products have and will continue to expand their presence in the plastics market.

According to analysts in the building products industry, plastic-based building products have seen their market share increase substantially over the past few years in such areas as polyvinyl chloride (PVC) building products. Some major products of the plastics segment include windows, siding, roofing, railings, columns, vinyl decks, patio doors as well as pipes and tubing. In particular, the use of plastic-based insulation, membranes, and piping provide three substantial prospects in this sector given their ability to save energy and limit greenhouse gases. Canada is a net importer of plastic building products, of which 85 percent comes from the United States.

Within the automotive industry, the proportion of plastics used in automotive assembly has grown from 27 kg per vehicle in 1970, to 163 kg today; with forecasts suggesting an expansion to upwards of 181 kg over the next two or three years. The increased implementation of plastics in automobiles continues to grow as manufacturers seek to limit fuel consumption, emissions, and cost. The primary benefit to plastics vis-à-vis automobiles is linked to the reduction of overall weight, which in turn reduces fuel consumption. Additionally, Canada's nation-wide automotive fleet grew by 1.4 million units in 2007 to 20.8 million units, of which 89 percent represent vehicles older than one year. As the fleet expands so too do the prospects for the automotive aftermarket, which given the expanded use of plastic products in new cars denotes growth in plastic aftermarket products as a corollary.

Environment Canada's fourth *Sustainable Development Strategy (2007-2009)* promulgates the Federal governments intention to undertake and support operations that target specific sustainable development practices across Canada. The document focuses on building energy

(energy efficiency in buildings), vehicle fleets, green procurement, and waste management, with government-led legislative and public initiatives – such as the Strategic Environmental Assessment (SEA) – to ensure acquiescence. Given the fervor with which the government(s) in Canada is pursuing “green” initiatives, and the consequent compliance by Canadian industry, the outlook for eco-friendly materials will grow continually hereafter. Insofar as plastics offer a viable solution to greenhouse gas emissions and sustainable development within the aforementioned markets, American plastics suppliers, manufacturers, and R&D specialists will find their prospects in Canada improved over the coming years; particularly given Canada’s present inability to fund adequate development in this sector.

Market Entry

The United States and Canada enjoy a long tradition of co-operative and lucrative trade. Due to the North American Free Trade Agreement (NAFTA), there are no significant trade barriers such as tariffs or import quotas impeding imports of plastics and resins into Canada. As such, plastic and resin trade remains unimpeded between Canada and the United States.

With most chemical products there are labeling and regulatory issues. For more information on Canada’s substance specific issues please refer to the Health Canada’s consumer safety website at http://www.hc-sc.gc.ca/hecs-sesc/whmis/substance_specific_issues.htm. In addition, further information on market access can be found on Industry Canada’s website at <http://www.ic.gc.ca/>.

Entering the Canadian plastics market with any degree of success requires the manufacturer to meet the needs of the end-user, as well as any government specifications. As mentioned, need within the major end-use sectors will stem predominantly from the increasing shift toward “green” technologies, or the alteration of present manufacturing trends to achieve more environmentally friendly results (i.e. the inclusion of plastics as an alternative). Provided the product is approved by the Canadian Standards Association (CSA), a distributor remains the most fortuitous avenue through which to enter the Canadian market. Distributors with strong relationships in the packaging, construction, automotive, electronic and furniture industries are aptly situated to facilitate product entry, or to improve a product’s presence in a specific end-use sector.

It is important for any company looking to enter the Canadian plastics market to observe and abide by the stipulations outlined in the *Canadian Environmental Protection Act (1999)*, and any provisions added heretofore. Additionally, given the aforementioned advantage held by American firms in R&D, there is room for U.S.-based production companies to establish working relationships with Canadian-based companies who may have an established market share or who can impart industry knowledge.

Trade Shows/Conferences

- Plast-Ex Summit, (Toronto, Ontario - May 22, 2008). <http://www.plastexsummit.ca/>
- International Conference on Wood and Biofibre Plastic Composites (Toronto, Ontario – May 12-13, 2008). <http://www.biocomposites-toronto.com/program.html>
- Canadian Plastic Resin Outlook Conference (Toronto, Ontario – October 2, 2008). <http://www.canplastics.com/Conference/conference.asp>.
- Expoplast 2008 (Montreal, Quebec – October 20-21, 2008) <http://www.expoplast.org/>.

- Association for Manufacturing Excellence Conference 2008 (Toronto, Ontario – October 20-24, 2008). <http://www.ame.org/>.
- APAC (Alliance Plastics and Composites) 2008 (Montreal, Quebec – October 22, 2008). <http://www.apacmontreal.com/>.
- Canadian Association of Mould Makers (CAMM) Trade Fair (Windsor, Ontario – November 13, 2008). <http://www.camm.ca>.

For More Information

The U.S. Commercial Service in Toronto, Canada can be contacted via e-mail at: Madellon.Lopes@mail.doc.gov; Phone: 1-416-595-5412 x227; Fax: 1-416-595-5419; or visit our website: www.buyusa.gov/canada.

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Drafted by: MLopes/MJoubarne