



**Department of
Development**

Policy Research and Strategic Planning Office
A State Affiliate of the U.S. Census Bureau



**The Ohio Polymers Industry:
Rubber and Plastic Resins and Products, and Related Machinery**

May 2010



Department of
Development

**THE OHIO POLYMERS INDUSTRY:
Rubber and Plastic Resins and Products,
and Related Machinery**

MAY 2010

B403 Don Larrick, Principal Analyst
Policy Research and Strategic Planning, Ohio Department of Development
P.O. Box 1001, Columbus, Oh. 43216-1001
Production Support: Steve Kelley, Editor; Robert Schmidley, GIS Specialist

TABLE OF CONTENTS	Page
Executive Summary - - - - -	1
Description of Ohio’s Polymers Industry - - - - -	4
Notable Polymers Industry Manufacturers- - - - -	6
Recent Expansion and Attraction Announcements- - - - -	12
The Composition of Ohio’s Polymers Industry: Value-Added- - - - -	14
The Composition of Ohio’s Polymers Industry: Employment - - - - -	16
Industry Pay - - - - -	18
The Distribution of Industry Establishments in Ohio - - - - -	20
The Distribution of Industry Employment in Ohio - - - - -	22
Foreign Investment in Ohio - - - - -	23
The Advantages of Locating in Ohio - - - - -	26
Trends - - - - -	28
Gross Domestic Product- - - - -	30
Exports - - - - -	32
Value-Added by Group- - - - -	34
Capital Expenditures by Group- - - - -	36
Establishments- - - - -	38
Employment- - - - -	40
Overview and Forecasts - - - - -	41
An Overview of the Industry- - - - -	42

The Near-and Long-Term Forecasts	47
Appendices -----	49
Detailed Tables -----	50
Table A1: Notable Polymers Industry Manufacturers in Ohio, 2009- - - -	51
Table A2: Expansion and Attraction Announcements in Ohio’s Polymers Industry, 2007-2009- - - - -	56
Table A3: Distribution of Value-Added in Ohio’s Plastic and Rubber Products Industry, 2002- - - - -	59
Table A4: Value-Added in the Plastic and Rubber Products Industry by Group, 2008- - - - -	61
Table A5: Establishments and Employment in the Polymers Industry, Ohio and U.S., 2007 - - - - -	62
Table A6: Employment and Pay in the Polymers Industry, Ohio and U.S., 2007- - - - -	63
Table A7: Establishments and Employment in Ohio’s Polymers Indus- try, by County, 2007- - - - -	64
Table A8: Total and Industry Gross Domestic Product for Ohio and the U.S.: 1999-2007- - - - -	65
Table A9: Exports of Plastic and Rubber Products (NAICS 326) from Ohio to the World - - - - -	66
Table A10: Trends in Value-Added for Ohio and the U.S.: 1999-2008- - -	67
Table A11: Trends in Capital Expenditures for Ohio and the U.S., 1999- 2008- - - - -	68
Table A12a: Polymers Industry Establishment Trends in Ohio: 2000-2007	69
Table A12b: Polymers Industry Establishment Trends in the U.S.: 2000- 2007- - - - -	70
Table A13a: Polymers Industry Employment Trends in Ohio: 2000-2007- -	71
Table A13b: Polymers Industry Employment Trends in the U.S.: 2000- 2007- - - - -	72
Table A14: Projections for Plastic and Rubber Products Employment, Ohio and the U.S.: 2006-2016- - - - -	73
 Industry Definition and Examples of Products -----	 74
 A Polymer Primer -----	 77
 Notes -----	 80
 Sources and References Cited -----	 83

EXECUTIVE SUMMARY

- The latest available data show \$5.08 billion worth of plastic and rubber products (NAICS 326) were made in Ohio, once again leading the nation as judged by Gross Domestic Product data for states from the U.S. Bureau of Economic Analysis. (2008)
- Factories in Ohio ranked first in manufacturing rubber products (3262) and second in plastic products (3261) based on the Census Bureau's 2008 Annual Survey of Manufactures value-added figures.
- Exports are an important market for rubber and plastic product makers, rising from \$1.07 billion 2001 to \$1.37 billion in 2009. NAFTA partners Canada and Mexico are the largest foreign market, combining for \$873.5 million of purchases in 2009. China (excluding Hong Kong and Macau) is the fastest growing market for Ohio's exports.
- Twenty-nine companies on Fortune magazine's U.S.-1,000 or Global-500 lists have polymers industry operations in Ohio; seven of them have their world headquarters here: A. Schulman, Cooper Tire & Rubber, Eaton, Goodyear Tire & Rubber, Owens-Illinois, Parker-Hannifin, and PolyOne.
- The latest available data also show 1,150 rubber and plastic industry establishments in Ohio employed more than 81,100 people; those figures represent over 7 percent of the U.S. industry's establishments and over 8 percent of its workforce according to the Census Bureau's County Business Patterns, and indicate the industry's concentration here.
- Seventy-Six counties have at least one industry establishment, with the majority in 12 counties: Ashtabula, Butler, Cuyahoga, Franklin, Geauga, Hamilton, Lake, Lorain, Montgomery, Portage, Stark, and Summit; a large portion of industry employment is in those counties.
- Goodyear is the largest polymers industry employer in Ohio with almost 3,100 people; other companies employing at least 1,000 include Cooper Tire & Rubber, Eaton, and Yamashita Rubber.
- International investment is important, with 44 companies from 13 foreign nations employing more than 8,000 people in Ohio making rubber and plastic products as well as resins and synthetic rubber; five of them were on Fortune's Global-500 list. Yamashita Rubber is the largest with more than 1,000 workers.

- Seventy-three companies announced 78 major industry investments in Ohio from 2007 through 2009. Planned expenditures approached \$1.5 billion, and over 2,500 new jobs are anticipated when the projects are completed, as reported by Policy Research and Strategic Planning (2010).
- The advantages of locating in Ohio include proximity to customers and suppliers (both of raw materials and production machinery), a well-developed, multi-modal transportation network, and a knowledgeable work force. In addition, Ohio's Third Frontier helps in a variety of ways to link the research capabilities of universities with entrepreneurial efforts in the development of new materials and technologies.
- The Center for Multifunctional Polymer Nanomaterial and Devices (CMPND) at the Ohio State University is developing and scaling-up a new generation of light-weight, high-strength, insulation-efficient, and fire-resistant polymeric foams using innovative nanomaterials and supercritical fluids technology. The global market for polymeric foams is estimated at \$13 billion. Several major and start-up companies in Ohio are collaborating with CMPND and The Ohio State University to enable products that have zero-ozone depleting and global warming blowing agents, use 100 percent recycled polymers, increase insulation values, and decrease weight and manufacturing costs.
- People working in Ohio's polymers industry averaged \$40,300 in pay according to the latest County Business Patterns (the national average was a little less than \$41,700). This is the aggregate result of the higher wages paid in rubber products (3262) – particularly new tire production (326211) – offsetting the lower wages in all other plastic products (326199).
- The proportion of capital expenditures in Ohio from 1999 through 2008 for the manufacture of both plastic (3261) and rubber (3262) products typically has equaled or exceeded the proportions of value-added from Ohio, indicating companies' continuing commitment to manufacturing here.
- Two trends in the maturing polymers industry are the consolidation of producers (particularly resin makers) and the globalization of operations.
- While growth of rubber and plastic resins and products is expected in the near term, the industry's expansion in production and capacity utilization levels is directly tied to the housing market (and associated consumer durables) and motor vehicle sales. Furthermore, high prices for oil and natural gas, which are both feedstock and energy source for the industry, will remain a major challenge for the industry. Mergers and acquisitions are expected to resume with economic recovery.
- While real growth in the output of plastic products (3261) is forecast to be faster than average over the decade of 2006-2016, the volume of rubber products (3262) manufactured may grow only slightly.

