

THE MATERIALS PROCESSING INDUSTRY CLUSTER IN NEW YORK STATE

Summary

- In general, products in the Materials Processing cluster are “enabling technologies” – intermediate inputs supporting other industrial applications, rather than final products. Examples of major industry consumers of materials include electronics and computers, transportation, aerospace, defense, telecommunications, consumer products, medical equipment and construction.
- Companies in the Materials Processing industry cluster in New York State employed more than 92,000 at 2,193 establishments in 2001.
- The cluster has five sub-clusters: Petroleum Products; Chemicals; Plastics and Rubber; Stone, Clay, Glass and Concrete; and Primary Metals.
- Half of all New York Materials Processing employment is located in the five regions located in the central and western portions of New York State – the Mohawk Valley, Central New York, the Finger Lakes, the Southern Tier and Western New York.
- Materials Processing is most significant in the Western New York, both in terms of total employment (almost 19,000 workers) and in employment concentration. Western New York employment is concentrated relative to the U.S. in all five Materials Processing sub-clusters, and has an overall location quotient of 1.43.

Definition of the Materials Processing Cluster

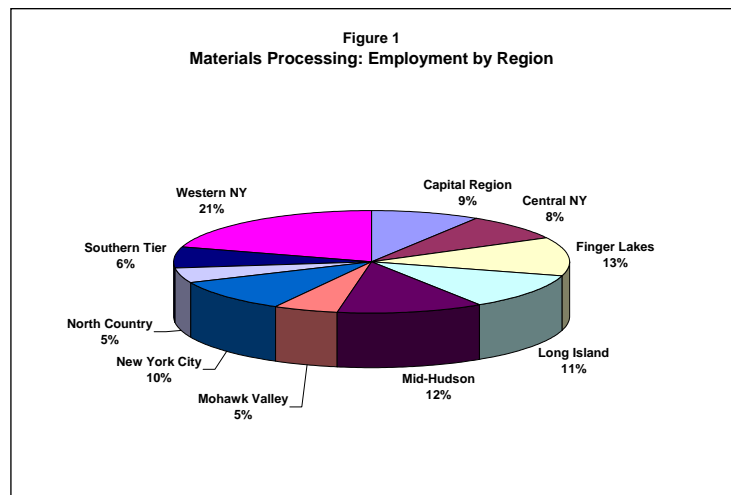
Materials Processing is defined using the new NAICS format to include 5 sub-clusters:

- Petroleum Products;
- Chemicals;
- Plastics and Rubber;
- Stone, Clay, Glass and Concrete; and
- Primary Metals.

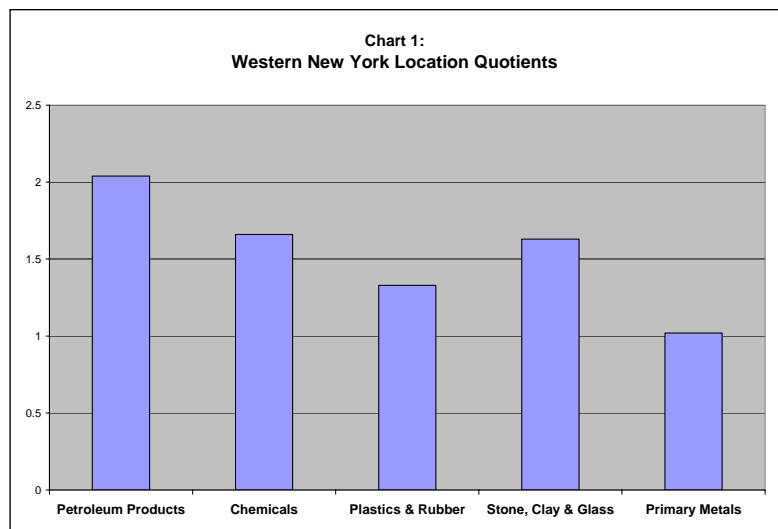
A detailed definition is in the Appendix.

New York State Profile and Trends

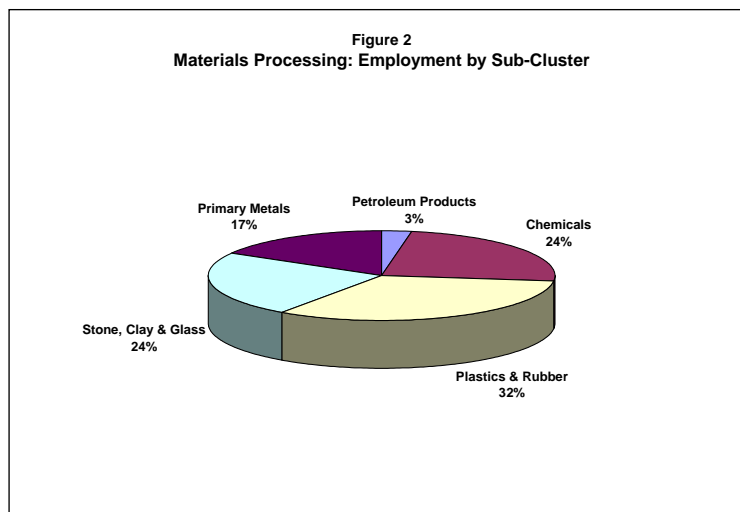
New York Materials Processing firms employed 92,650 employees at 2,193 establishments in 2001. The largest-employing region, Western New York, has almost 19,000 workers, several thousand more than the next highest region, the Finger Lakes, with over 11,000 workers. Long Island and the Mid-Hudson region also have employment levels above 10,000 workers. Figure 1 shows the share of Materials Processing employment in each region.



Materials Processing is most significant in Western New York, both in terms of total employment (almost 19,000 workers) and in employment concentration. Western New York employment is concentrated relative to the U.S. in all five Materials Processing sub-clusters, and has an overall location quotient of 1.43. Sub-cluster LQs exceed 1.5 for Petroleum Products, Chemicals, and Stone, Clay, Glass, and Concrete. (See Chart 1.)



Materials Processing is spread fairly evenly among four of the five sub-clusters. The largest sub-cluster is Plastics and Rubber, with 32% of total employment. Chemicals and Stone, Clay, Glass and Concrete each account for 24% of total employment, while Primary Metals employment is 17% of the total. Only Petroleum Products has a very small share of total employment (3%). (See Figure 2.)



The size of firms in New York's Materials Processing cluster ranges from very small specialty metals finishing operations with fewer than 20 employees, to large commodities producers (Alcoa, Reynolds); and from incubator ceramics start-ups to very large, vertically-integrated corporations producing both materials and end-products (Corning). New York State research and development for materials processing has been enhanced by the New York State Centers for Advanced Technology, especially the Center for Advanced Ceramic Technology at Alfred University, and the Center for Advanced Materials Processing at Clarkson University.

Regional Highlights

Western New York (Buffalo, Niagara Falls)

	Establishments	Employment	Location Quotient
Petroleum Products	26	1,175	2.04
Chemicals	70	5,032	1.66
Plastics & Rubber	85	5,655	1.33
Stone, Clay & Glass	76	4,233	1.63
Primary Metals	33	2,762	1.02

- Western New York in 2001 had 18,857 workers at 290 establishments. Employment is particularly sizeable in Plastics and Rubber; Chemicals; and Stone, Clay, Glass and Concrete.
- Employment in Materials Processing in Western New York is concentrated relative to national employment patterns, with a location quotient of 1.43.
- The region is concentrated in all 5 Materials Processing sub-clusters.

- Among the region’s leading firms in this cluster are:
 - Outokumpu American Brass Inc. – a producer of copper and copper alloy products
 - E.I. Dupont Inc. – a manufacturer of plastics packaging and films
 - Henkel Technologies – manufactures specialty encapsulation chemicals

Finger Lakes (Rochester)

	Establishments	Employment	Location Quotient
Petroleum Products	18	138	0.27
Chemicals	32	1,610	0.59
Plastics & Rubber	102	6,616	1.73
Stone, Clay & Glass	67	2,477	1.07
Primary Metals	11	528	0.22

- The Finger Lakes in 2001 had 11,368 workers at 230 establishments. Employment is particularly sizeable in Plastics and Rubber, and Stone, Clay, Glass and Concrete.
- Employment is concentrated relative to the U.S. in Plastics and Rubber and in Stone, Clay, Glass and Concrete.
- Among the region’s leading firms in this cluster are:
 - Eastman Kodak Co. – producer of film, photography chemicals, imaging supplies
 - Nalge Nunc International – manufacturer of plastic products: tanks, tubing, camping products, water bottles & laboratory supplies
 - Pactiv Corp. – manufactures polystyrene foam

Mid-Hudson Region (Poughkeepsie, Westchester County)

	Establishments	Employment	Location Quotient
Petroleum Products	23	226	0.29
Chemicals	70	4,128	1.01
Plastics & Rubber	64	3,144	0.55
Stone, Clay & Glass	93	1,829	0.52
Primary Metals	24	1,707	0.47

- The Mid-Hudson region in 2001 had 11,034 workers at 274 establishments. Employment is particularly sizeable in Chemicals and Plastics and Rubber.
- Employment in Chemicals is concentrated just above what would be expected from national employment trends.
- Among the region’s leading firms in this cluster are:
 - Aluf Plastics – manufactures custom and stock plastic bags and liners
 - Pawling Corp. – manufactures rubber, plastic & silicone extruded products
 - Uneeda Enterprises Inc. – manufactures abrasive products and sandpapers

Long Island

	Establishments	Employment	Location Quotient
Petroleum Products	16	180	0.16
Chemicals	73	3,669	0.63
Plastics & Rubber	126	4,711	0.58
Stone, Clay & Glass	118	1,574	0.32
Primary Metals	32	472	0.09

- Long Island in 2001 had 10,606 workers at 365 establishments. Employment is particularly sizeable in Plastics and Rubber and Chemicals.
- Among the region's leading firms in this cluster are:
 - Creative Bath Products – manufactures plastic bathroom accessories
 - Seal-It Inc. – manufactures heat-shrink packaging materials
 - Topiderm – manufactures personal care products

Central New York (Syracuse)

	Establishments	Employment	Location Quotient
Petroleum Products	9	250	0.78
Chemicals	27	303	0.18
Plastics & Rubber	31	1,970	0.84
Stone, Clay & Glass	38	1,735	1.21
Primary Metals	25	3,406	2.27

- Central New York in 2001 had 7,664 workers at 130 establishments. Employment is particularly sizeable in Primary Metals.
- Materials Processing employment in Central New York is about 5% higher than would be expected based on national employment patterns.
- Employment is concentrated in two Materials sub-clusters: Primary Metals (Location Quotient = 2.27) and Stone, Clay, Glass and Concrete (LQ = 1.21).
- Among the region's leading firms in this cluster are:
 - Alcan Aluminum Corporation – produces hot & cold rolled plate and sheet aluminum
 - Tessa Plastics Corp – custom plastic injection molding & assemblies
 - International Wire Group – copper wire drawing & copper extruding

Southern Tier (Binghamton, Elmira)

	Establishments	Employment	Location Quotient
Petroleum Products	14	237	0.87
Chemicals	7	328	0.23
Plastics & Rubber	33	1,200	0.60
Stone, Clay & Glass	69	3,996	3.28
Primary Metals	5	232	0.18

- The Southern Tier in 2001 had 5,992 workers at 128 establishments. Employment is particularly sizeable in Stone, Clay, Glass and Concrete, reflecting the well-known “Ceramics Corridor” centered on Corning. Employment is also strong in Plastics & Rubber.
- Stone, Clay, Glass & Concrete is highly concentrated in the Southern Tier, with a Location Quotient of 3.28.
- Among the region’s leading firms in this cluster are:
 - AL Blades & Sons Inc. – manufactures asphalt and asphalt products
 - Anchor Glass Container Corp – manufactures glass containers
 - Corning Inc. – manufactures pressed & blown glassware, molten metal filters, fiber optics, adhesives and sealants

Mohawk Valley (Utica, Rome)

	Establishments	Employment	Location Quotient
Petroleum Products	8	26	0.17
Chemicals	13	710	0.89
Plastics & Rubber	21	863	0.77
Stone, Clay & Glass	18	535	0.79
Primary Metals	15	2,869	4.02

- The Mohawk Valley in 2001 had 5,003 workers at 75 establishments. Employment is particularly sizeable in Primary Metals.
- Materials Processing is well-concentrated in the region, with a Location Quotient of 1.44.
- Primary Metals is highly concentrated in the region, with a Location Quotient of 4.02.
- Among the region's leading firms in this cluster are:
 - Bonide Products Inc. – manufactures pesticides and insecticides
 - Keymark Corp. – aluminum extruding & finishing
 - Special Metals Corp. – manufactures electro-metallurgical products

Regional Materials Processing Companies

Company Name	City
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Capital Region (Albany, Schenectady, Troy)

GE Silicones	Waterford
General Electric Plastics	Selkirk
Latham International	Latham
Owens Corning	Feura Bush
Saint-Gobain Abrasives Inc	Watervliet
Schenectady International Inc	Schenectady

Central New York (Syracuse)

Agway Inc	Syracuse
Alcan Aluminum Corp	Oswego
Die Molding Corp	Canastota
Gray-Syracuse Inc	Chittenango
J M Murray Center Inc	Cortland
Landis Plastics Inc	Solvay
MacKenzie-Childs Ltd	Aurora
Nucor Steel Auburn Inc	Auburn
Owens-Illinois	Auburn
Owl Wire & Cable Inc	Canastota
Suit-Kote Corp	Cortland
Syracuse China Co	Syracuse
Tessy Plastics Corp	Elbridge

Finger Lakes (Rochester)

Alliance Precision Plastics Co	Rochester
Century Mold Co Inc	Rochester
Eastman Kodak Co	Rochester
Guardian Industries Corp	Geneva
Lapp Insulator Co LLC	Le Roy
Nalge Nunc International	Rochester
Newtex Industries Inc	Victor
Pactiv Corp	Canandaigua
Pliant Corp	Macedon
Schlegel Systems Inc	Rochester
Silgan Plastics Corp	Penn Yan
Zotos International Inc	Geneva

Long Island

Creative Bath Products Inc	Central Islip
Del Laboratories Inc	Uniondale
Estee Lauder Inc	Melville

M & M Molding Corp	Central Islip
Olga G Marcus Cosmetics Inc	Hauppauge
Penthouse Manufacturing Co	Freeport
Seal-it Inc	Farmingdale
Topiderm Inc	Amityville
Whitman Packaging Corp	Hauppauge

Mid-Hudson (Poughkeepsie, Spring Valley)

Aluf Plastics	Orangeburg
Engelhard Corp	Peekskill
Genpak LLC	Middletown
Hydro Aluminum North America	Ellenville
Kolmar Laboratories Inc	Port Jervis
Pawling Corp	Pawling
Quikrete Package Pavement	Stormville
Uneeda Enterprises Inc	Spring Valley
United States Gypsum Co Inc	Stony Point

Mohawk Valley (Utica, Rome)

Bonide Products Inc	Oriskany
Indium Corp Of America	Utica
International Wire Group Inc	Camden
Keymark Corp	Fonda
La Salle Laboratories Inc	Little Falls
Liberty Enterprises	Amsterdam
Special Metals Corp	New Hartford

North Country (Plattsburgh, Watertown)

Alcoa Inc	Massena
Alcoa Inc	Massena
Car-Freshner Corp	Watertown
Corning Inc	Canton
Mold Rite Plastics Inc	Plattsburgh

New York City

Abbott Industries Inc	Jamaica
Amerada Hess Corp	New York
Avon Products Inc	New York
Carrera Casting Corp	New York
Chanel Inc	New York
Clay-Park Labs Inc	Bronx
Colgate Palmolive Co	New York
Coty US LLC	New York
Estee Lauder Inc	New York
Gary Plastic Packaging Corp	Bronx
L'Oreal USA Inc	New York

Niagara Corp	New York
Revlon Inc	New York
Riva Jewelry Manufacturing Inc	Long Island City
Sanofi-Synthelabo Inc	New York
Unilever Cosmetics Intl	New York
Wallace Packaging Corp	Maspeth
WHX Corp	New York
Your Name Professional Brands	Long Island City

Southern Tier (Binghamton, Elmira)

AL Blades & Sons Inc	Hornell
Anchor Glass Container Corp	Elmira
Corning Inc	Oneonta
Corning Inc	Painted Post
Corning Inc	Corning
F M Howell & Co	Elmira
McWane Inc	Elmira
Steuben Glass	Corning

Western New York (Buffalo, Niagara Falls)

3M	Tonawanda
Bristol-Myers Squibb	Buffalo
CertainTeed Corp	Buffalo
Dal-Tile Corp	Olean
DuPont	Niagara Falls
Ferro Electronics Materials	Niagara Falls
Goodyear-Dunlop Tire	Buffalo
Henkel Technologies	Olean
Invitrogen Corp	Grand Island
Occidental Chemical Corp	Niagara Falls
Oneida Dinnerware	Buffalo
Osmose Inc	Buffalo
Outokumpu American Brass Inc	Buffalo
P S M Group Inc	Forestville
Powerflow Inc	Buffalo
Saint Gobain Structural Cermcs	Niagara Falls
Staroba Plastic & Metal Prods	Holland
Vesuvius Monofrax Inc	Falconer
Washington Mills Electro	Niagara Falls

APPENDIX A: Cluster Definition

Empire State Development defines the Materials Processing cluster as composed of these NAICS industries:

Chemicals Sub-Cluster

- 325110 Petrochemical Manufacturing
- 325120 Industrial Gas Manufacturing
- 325131 Inorganic Dye and Pigment Manufacturing
- 325132 Synthetic Organic Dye and Pigment Manufacturing
- 325181 Alkalis and Chlorine Manufacturing
- 325182 Carbon Black Mfg
- 325188 All Other Basic Inorganic Chemical Manufacturing
- 325191 Gum and Wood Chemical Mfg
- 325192 Cyclic Crude and Intermediate Mfg
- 325193 Ethyl Alcohol Mfg
- 325199 All Other Basic Organic Chemical Manufacturing
- 325211 Plastics Material and Resin Manufacturing
- 325212 Synthetic Rubber Manufacturing
- 325221 Cellulosic Organic Fiber Manufacturing
- 325222 Noncellulosic Organic Fiber Manufacturing
- 325311 Nitrogenous Fertilizer Manufacturing
- 325312 Phosphatic Fertilizer Mfg
- 325314 Fertilizer (Mixing Only) Manufacturing
- 325320 Pesticide and Other Agricultural Chemical Mfg
- 325510 Paint and Coating Manufacturing
- 325520 Adhesive Manufacturing
- 325611 Soap and Other Detergent Manufacturing
- 325612 Polish and Other Sanitation Good Manufacturing
- 325613 Surface Active Agent Manufacturing
- 325620 Toilet Preparation Manufacturing
- 325910 Printing Ink Manufacturing
- 325920 Explosives Manufacturing
- 325991 Custom Compounding of Purchased Resins
- 325998 All Other Miscellaneous Chemical Product/Prep Mfg

Plastics and Rubber Sub-Cluster

- 326111 Unsupported Plastics Bag Manufacturing
- 326112 Unsupported Plastics Packaging Film/Sheet Mfg
- 326113 Unsupported Plastics Film and Sheet Mfg
- 326121 Unsupported Plastics Profile Shape Manufacturing
- 326122 Plastics Pipe and Pipe Fitting Manufacturing
- 326130 Laminated Plastics Plate, Sheet, and Shape Mfg
- 326140 Polystyrene Foam Product Manufacturing
- 326150 Urethane and Other Foam Product Mfg
- 326160 Plastics Bottle Manufacturing
- 326191 Plastics Plumbing Fixture Manufacturing
- 326192 Resilient Floor Covering Manufacturing
- 326199 All Other Plastics Product Manufacturing

326211 Tire Manufacturing (except Re-treading)
326212 Tire Re-treading
326220 Rubber and Plastics Hoses and Belting Mfg
326291 Rubber Product Manufacturing for Mechanical Use
326299 All Other Rubber Product Manufacturing

Stone, Clay, Glass and Concrete Sub-Cluster

327111 Vitreous China Plumbing Fixture, China Mfg
327112 Vitreous China, Fine Earthenware Mfg
327113 Porcelain Electrical Supply Manufacturing
327121 Brick and Structural Clay Tile Manufacturing
327122 Ceramic Wall and Floor Tile Manufacturing
327123 Other Structural Clay Product Manufacturing
327124 Clay Refractory Manufacturing
327125 Non-clay Refractory Manufacturing
327211 Flat Glass Manufacturing
327212 Other Pressed and Blown Glass Mfg
327213 Glass Container Manufacturing
327215 Glass Product Manufacturing
327310 Cement Manufacturing
327320 Ready-Mix Concrete Manufacturing
327331 Concrete Block and Brick Manufacturing
327332 Concrete Pipe Manufacturing
327390 Other Concrete Product Manufacturing
327410 Lime Manufacturing
327420 Gypsum Product Manufacturing
327910 Abrasive Product Manufacturing
327991 Cut Stone and Stone Product Manufacturing
327992 Ground or Treated Mineral and Earth Manufacturing
327993 Mineral Wool Manufacturing
327999 All Other Miscellaneous Nonmetallic Mfg

Primary Metals Sub-Cluster

331111 Iron and Steel Mills
331112 Electrometallurgical Ferroalloy Mfg
331210 Iron and Steel Pipe and Tube Mfg
331221 Rolled Steel Shape Manufacturing
331222 Steel Wire Drawing
331311 Alumina Refining
331312 Primary Aluminum Production
331314 Secondary Smelting and Alloying of Aluminum
331315 Aluminum Sheet, Plate, and Foil Manufacturing
331316 Aluminum Extruded Product Manufacturing
331319 Other Aluminum Rolling and Drawing
331411 Primary Smelting of Copper
331419 Primary Smelting and Refining of Nonferrous Metal
331421 Copper Rolling, Drawing, and Extruding
331422 Copper Wire (except Mechanical) Drawing
331423 Secondary Copper Processing
331491 Nonferrous Metal Rolling, Drawing, and Extruding

331492 Secondary Smelting, Refining, and Alloying of Other Metals
331511 Iron Foundries
331512 Steel Investment Foundries
331513 Steel Foundries (except Investment)
331521 Aluminum Die-Casting Foundries
331522 Nonferrous (except Aluminum) Die-Casting Foundries
331524 Aluminum Foundries (except Die-Casting)
331525 Copper Foundries (except Die-Casting)
331528 Other Nonferrous Foundries (except Die-Casting)

Petroleum Products Sub-Cluster

324110 Petroleum Refineries
324121 Asphalt Paving Mixture and Block Mfg
324122 Asphalt Shingle and Coating Materials Mfg
324191 Petroleum Lubricating Oil and Grease Mfg
324199 All Other Petroleum and Coal Products Mfg

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