



Industry Spotlight

Chemical Manufacturing

Reading, PA MSA



Greater Reading Chamber Alliance
www.GreaterReading.org

Industry Snapshot 4

Staffing Pattern 5

Drivers of Employment Growth 6

Employment Distribution by Type 7

Establishments 8

GDP & Productivity..... 9

Supply Chain: Top Suppliers 10

Sector Strategy Pathways..... 11

Postsecondary Programs Linked to Chemical Manufacturing 12

Reading, PA MSA Regional Map..... 13

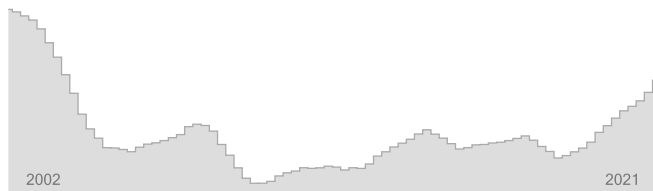
Region Definition..... 14

Data Notes..... 15

FAQ..... 15

Chemical Manufacturing Reading, PA MSA – 2021Q4

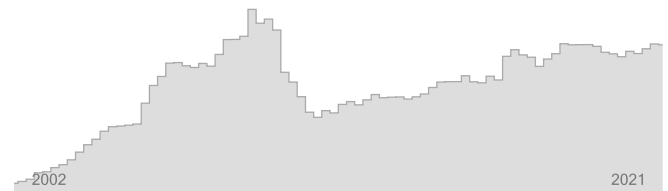
EMPLOYMENT



1,148

Regional employment / **878,547** in the nation

WAGES

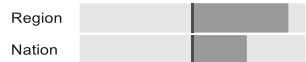


\$64,453

Avg Wages per Worker / **\$103,788** in the nation

1.8% ↑

Avg Ann % Change Last 10 Years / **+1.0%** in the US



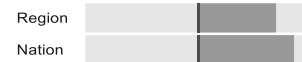
0.7%

% of Total Employment / **0.6%** in the US

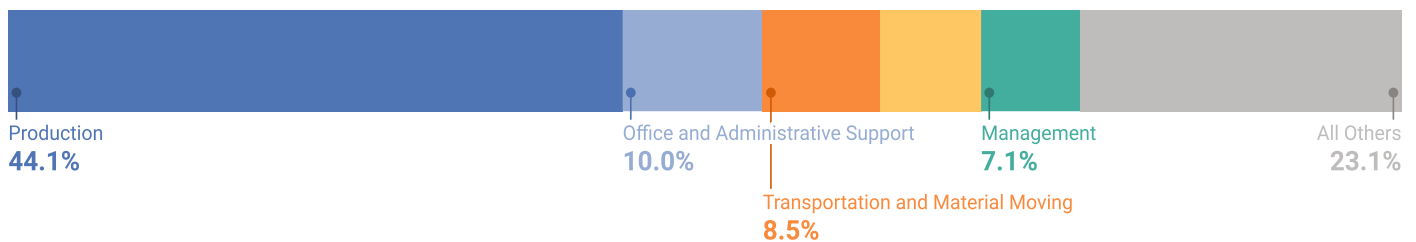


1.8% ↑

Avg Ann % Change Last 10 Years / **+2.3%** in the US

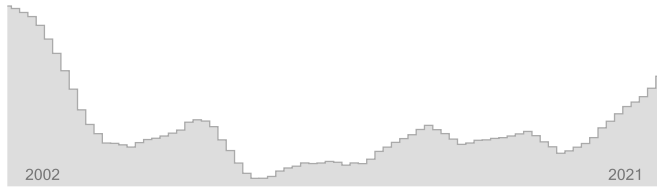


TOP OCCUPATION GROUPS

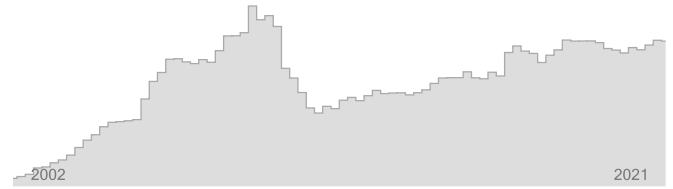


Industry Snapshot


EMPLOYMENT



WAGES

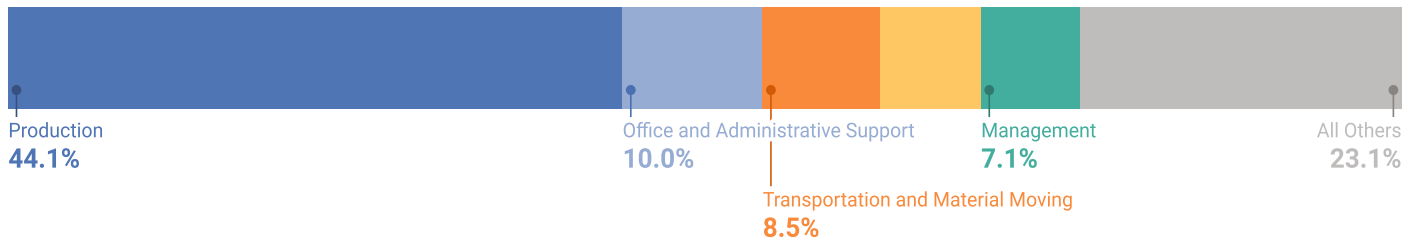


3-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Chemical Manufacturing	1,148	\$64,453	1.15		107	-0.4%

 Employment is one of the broadest and most timely measures of a region's economy. Fluctuations in the number of jobs shed light on the health of an industry. A growing employment base creates more opportunities for regional residents and helps a region grow its population.

 Since wages and salaries generally compose the majority of a household's income, the annual average wages of a region affect its average household income, housing market, quality of life, and other socioeconomic indicators.

Staffing Pattern



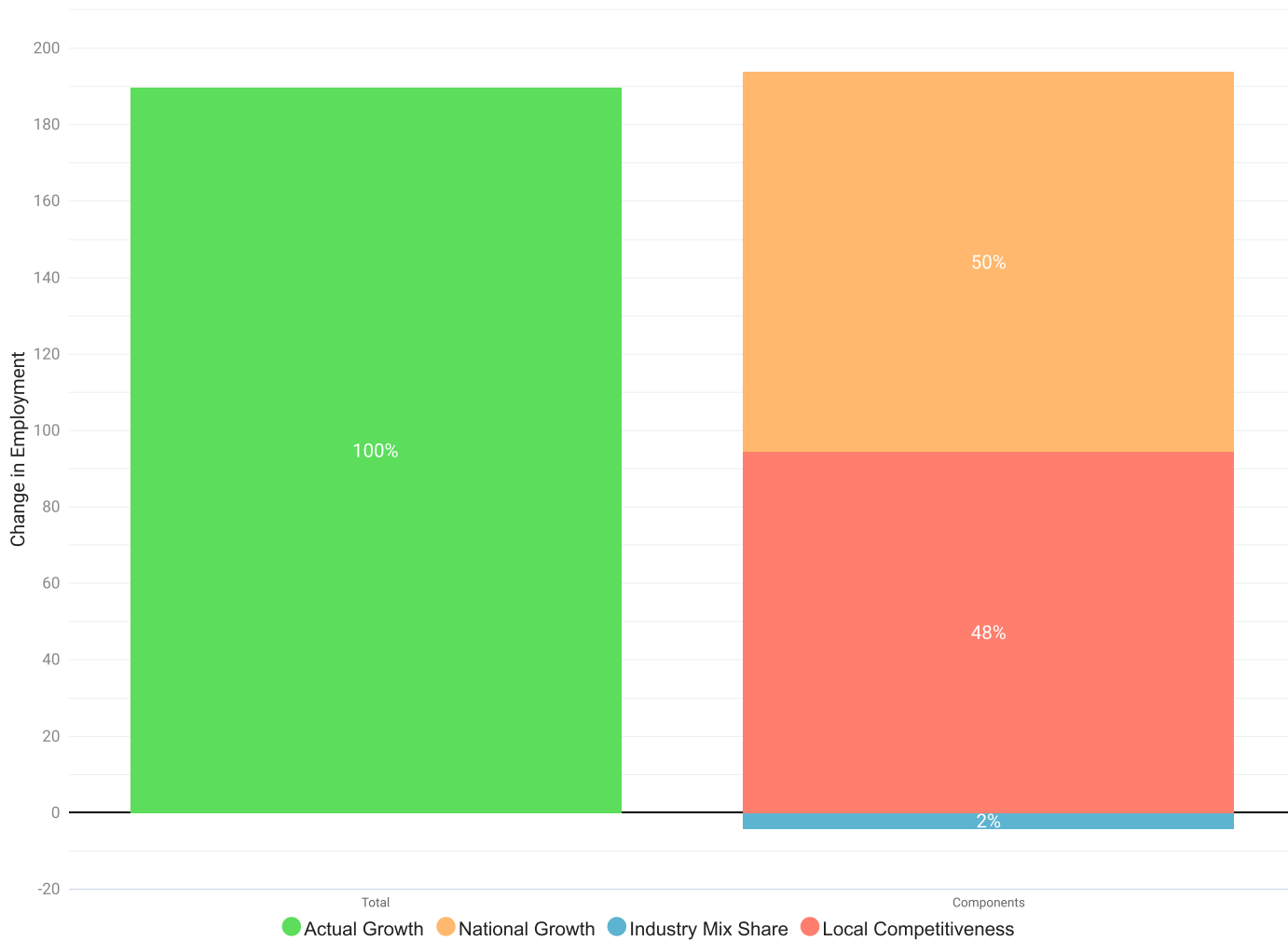
6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Chemical Equipment Operators and Tenders	142	\$46,600	12
Packaging and Filling Machine Operators and Tenders	96	\$35,900	10
Mixing and Blending Machine Setters, Operators, and Tenders	66	\$41,400	7
First-Line Supervisors of Production and Operating Workers	50	\$66,700	5
Industrial Machinery Mechanics	37	\$58,500	4
Laborers and Freight, Stock, and Material Movers, Hand	37	\$35,500	5
Chemical Technicians	34	\$50,200	4
Chemists	32	\$69,100	3
Chemical Plant and System Operators	31	\$74,400	3
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	30	\$72,200	3
Remaining Component Occupations	573	\$66,400	52
Total	1,129		

 The mix of occupations points to the ability of a region to support an industry and its flexibility to adapt to future demand. Industry wages are a component of the cost of labor for regional employers.



Drivers of Employment Growth

Over the ten years ending 2021, employment in Chemical Manufacturing for the Reading, PA MSA added 190 jobs. After adjusting for national growth during this period and industry mix share, the part of this employment change due to local competitiveness was a gain of 95 jobs—meaning this industry was more competitive than its national counterpart during this period.

Drivers of Employment Growth for Reading, PA MSA



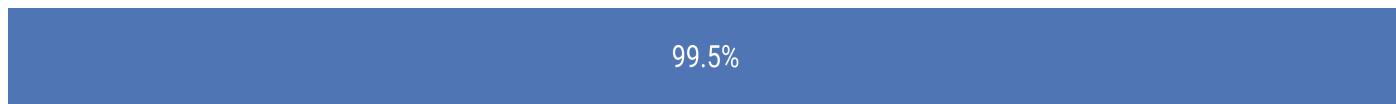
Source: JobsEQ®, Data as of 2021Q4



-  Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
-  National growth is due to the overall growth or contraction in the national economy. Industry mix share is the growth attributable to the specific industries examined (based on national industry growth patterns and the industry mix of the region).

Employment Distribution by Type

The table below shows the employment mix by ownership type for Chemical Manufacturing for the Reading, PA MSA. Four of these ownership types — federal, state, and local government and the private sector — together constitute “Covered Employment” (employment covered by the Unemployment Insurance programs of the United States and reported via the Quarterly Census of Employment and Wages).

“Self-Employment” refers to unincorporated self-employment and represents workers whose primary job is self-employment (that is, these data do not include workers whose primary job is a wage-and-salary position that is supplemented with self-employment).



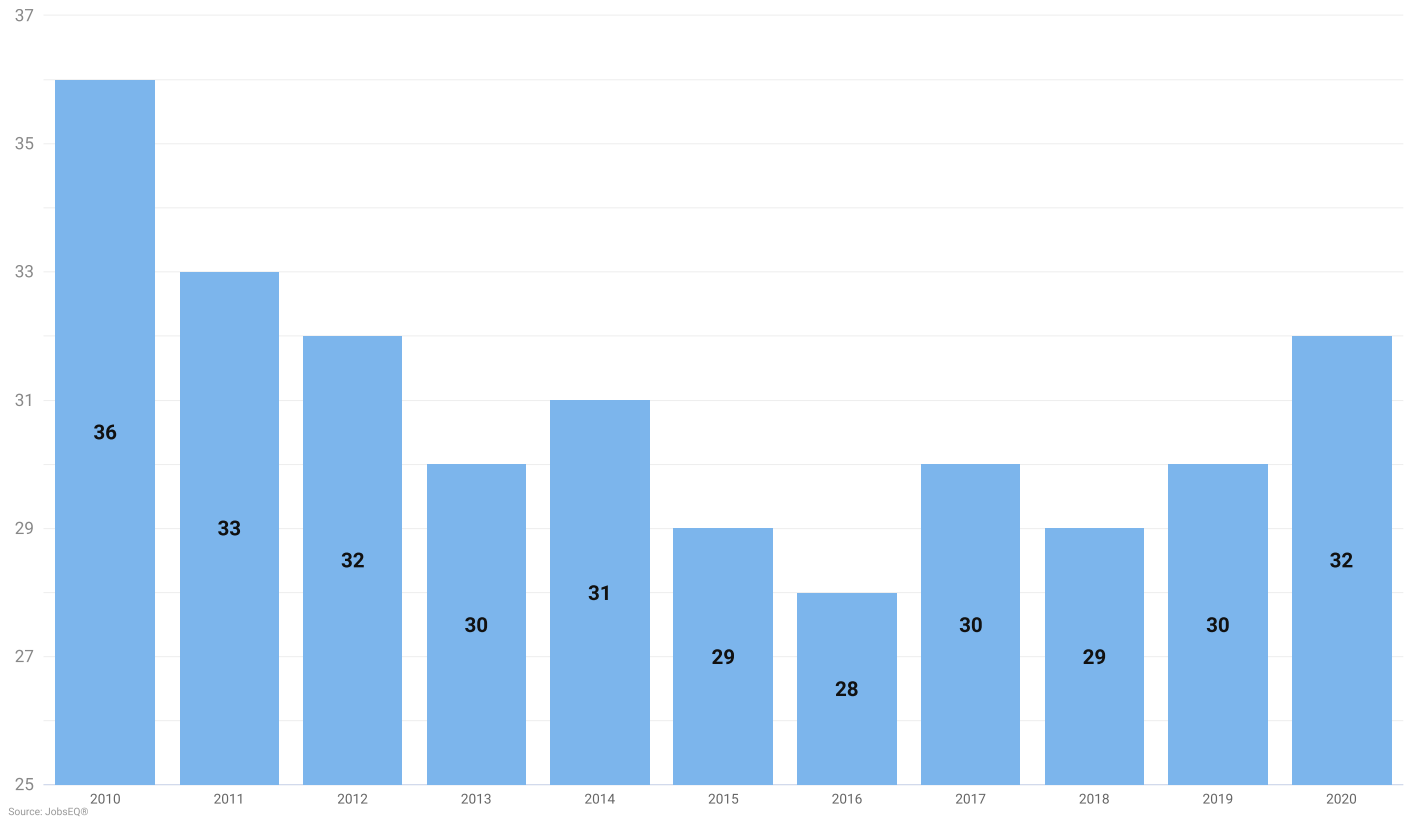
	Empl	%
 Private	1,143	99.5%
 Self-Employment	5	0.5%


Source: JobsEQ®

 Strong entrepreneurial activity is indicative of growing industries. Using self-employment as a proxy for entrepreneurs, a higher share of self-employed individuals within a regional industry points to future growth.

Establishments

In 2020, there were 32 Chemical Manufacturing establishments in the Reading, PA MSA (per covered employment establishment counts), a decrease from 36 establishments ten years earlier in 2010.

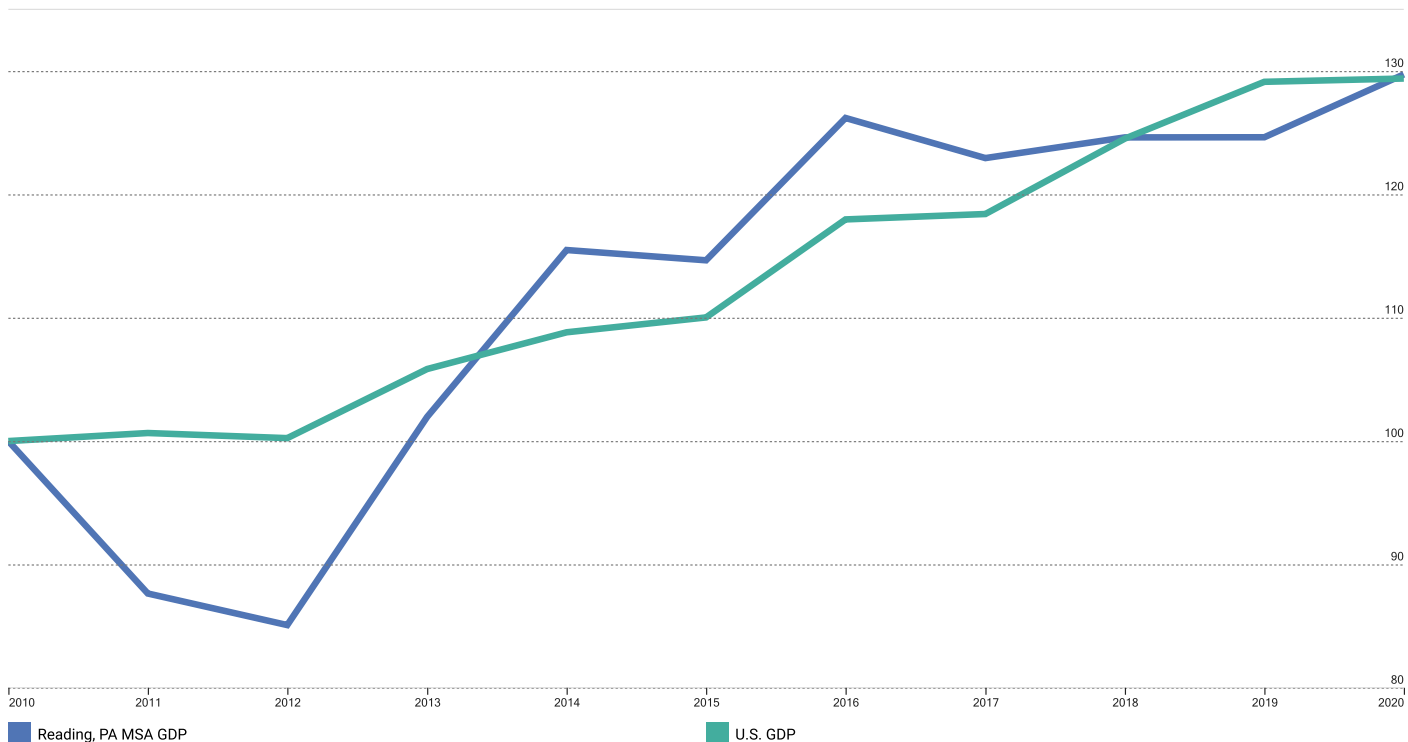


 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business activity takes place, and with at least one employee.

GDP & Productivity

In 2020, Chemical Manufacturing produced \$0.3 billion in GDP for the Reading, PA MSA.

GDP: Indexed 2010 = 100



1.4 %

Industry Share of Total GDP /
1.9 % in the nation



2.6 % ↑

Avg Ann % Change Last 10 Yrs /
2.6 % in the nation



\$742k

Output per Worker /
\$1,014k in the nation




💡 Gross domestic product (GDP) is the most comprehensive measure of regional economic activity, and an industry's contribution to GDP is an important indicator of regional industry strength. It is a measure of total value-added to a regional economy in the form of labor income, proprietor's income, and business profits, among others. GDP values shown on this page are nominal GDP data.

💡 Growth in productivity (output per worker) leads to increases in wealth and higher average standards of living in a region.

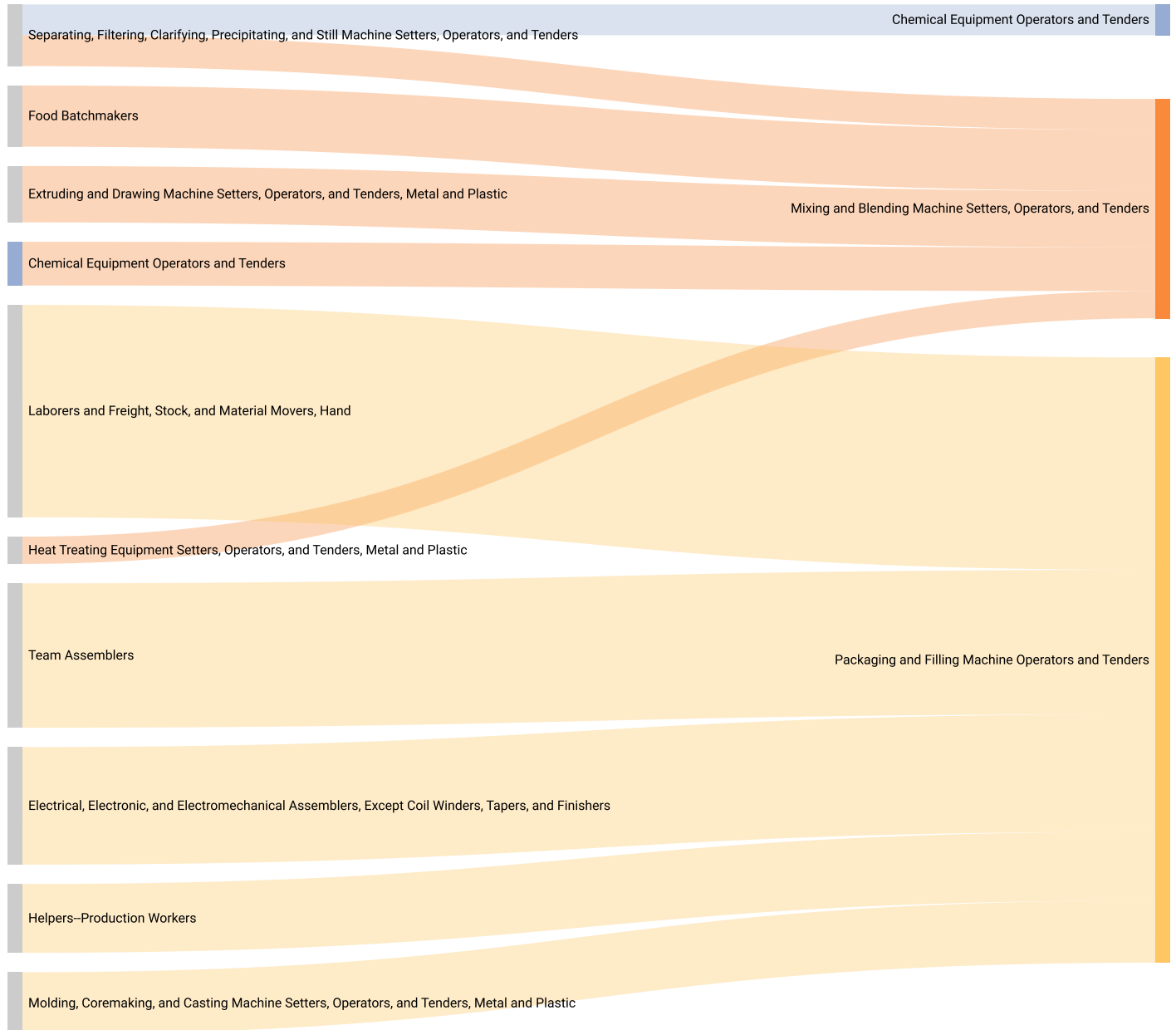
Supply Chain: Top Suppliers


As of 2021Q4, Chemical Manufacturing in the Reading, PA MSA are estimated to make \$478.6 million in annual purchases from suppliers in the United States with about 30% or \$143.2 million of these purchases being made from businesses located in the Reading, PA MSA.

3-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Chemical Manufacturing	\$46.3	\$82.5
Management of Companies and Enterprises	\$33.2	\$1.6
Petroleum and Coal Products Manufacturing	<\$0.1	\$30.0
Professional, Scientific, and Technical Services	\$3.7	\$22.2
Merchant Wholesalers, Durable Goods	\$5.6	\$18.9
Remaining Supplier Industries	\$54.2	\$180.2
Total	\$143.2	\$335.4

 Supplier-buyer networks can indicate local linkages between industries, regional capacity to support growth in an industry, and potential leakage of sales out of the region.

Sector Strategy Pathways





 The graphics on this page illustrate relationships and potential movement (from left to right) between occupations that share similar skill sets. Developing career pathways as a strategy promotes industry employment growth and workforce engagement.

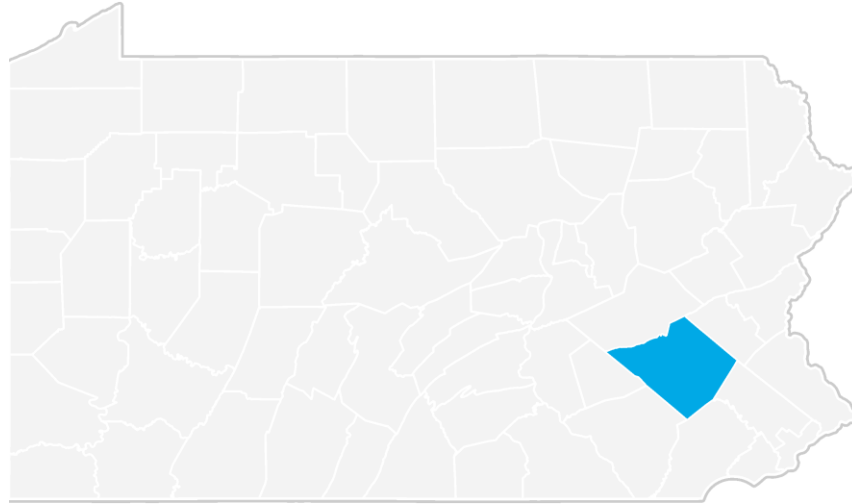
Postsecondary Programs Linked to Chemical Manufacturing

Program	Awards
Albright College	
Business Administration and Management, General	80
Chemistry, General	1
Alvernia University	
Chemistry, General	6
Kutztown University of Pennsylvania	
Business Administration and Management, General	279
Chemistry, General	8
Commercial and Advertising Art	56
Digital Arts	18
Reading Area Community College	
Business Administration and Management, General	74
Computer/Computer Systems Technology/Technician	15
Electrical and Power Transmission Installation/Installer, General	22

Source: [JobsEQ®](#)

-  The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.
-  Among postsecondary programs at schools located in the Reading, PA MSA, the sampling above identifies those most linked to occupations relevant to Chemical Manufacturing. For a complete list see JobsEQ®, <http://www.chmuraecon.com/jobseq>

Reading, PA MSA Regional Map



Region Definition

Reading, PA MSA is defined as the following counties:

Berks County, Pennsylvania

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2021Q4 and are based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts.
- Occupation employment is as of 2021Q4 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OES data. Occupation wages are per the BLS OES data and are as of 2020.
- GDP is derived from BEA data and imputations by Chmura. Productivity (output per worker) is calculated by Chmura using industry employment and wages as well as GDP and BLS output data. Supply chain modeling including purchases by industry are developed by Chmura.
- Postsecondary awards are per the NCES and are for the 2019-2020 academic year.
- Establishment counts are per the BLS QCEW data.
- Figures may not sum due to rounding.

FAQ

What is (LQ) location quotient?

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

What is annual demand?

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.

What is the difference between industry wages and occupation wages?

Industry wages and occupation wages are estimated via separate data sets, often the time periods being reported do not align, and wages are defined slightly differently in the two systems (for example, certain bonuses are included in the industry wages but not the occupation wages). It is therefore common that estimates of the average industry wages and average occupation wages in a region do not match exactly.