Pricing Trends/Market Size Insight for Rubber Products

Quarterly Pricing Trends

The Producer Price Index (PPI) data presented here provide a snapshot in time of pricing trends for five common industrial product groups sold by NAHAD members. This report provides a national benchmark and comparison of the latest quarterly data with the previous quarter and the same quarter of the previous year. It represents trends in selling prices received by domestic producers and is a good barometer for inflationary pressures felt at the wholesale level.

During the second quarter of 2021, all products increased in selling prices at the domestic producer level and experienced a positive increase from the previous year, with Industrial Hose showing the largest increase at 7.6%.

Product Categories	Quarterly % Change 1Q21:2Q21	Annual % Change 2Q20:2Q21
Hydraulic Hose	N/A	N/A
Industrial Hose	+ 3.8	+ 7.6
Conveyor Belt	+ 0.6	+ 1.3
Transmission Belt	+ 0.4	+ 0.4
Seals & O-Rings	+ 0.9	+ 2.7

Source: Quarterly Producer Price Index, U.S. Bureau of Labor Statistics. For more detail on pricing trends methodology, see appendix at the end of this report.

Quarterly Pricing Trends:

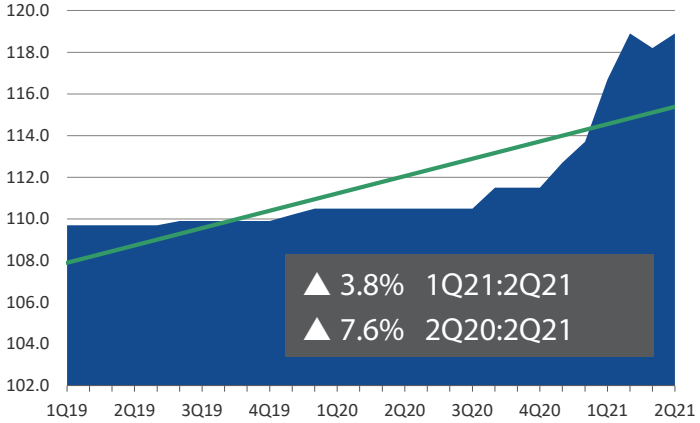
Hose – Hydraulic/Industrial

- NOTE: the Hydraulic Hose Producer Price Index has not been updated by the Department of Labor and so is not included in this report.
- The Industrial Hose Price Index had its largest spike in 1Q21.

Hydraulic Hose

NOTE: The Hydraulic Hose Producer Price Index has not been updated by the Department of Labor and so is not included in this quarter's data

Industrial Hose

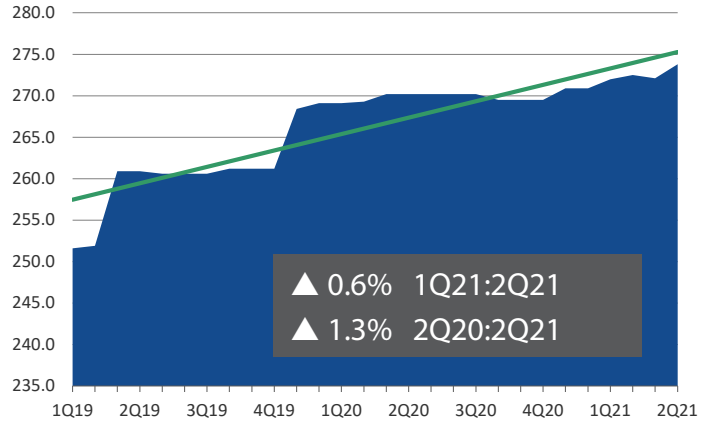


Quarterly Pricing Trends:

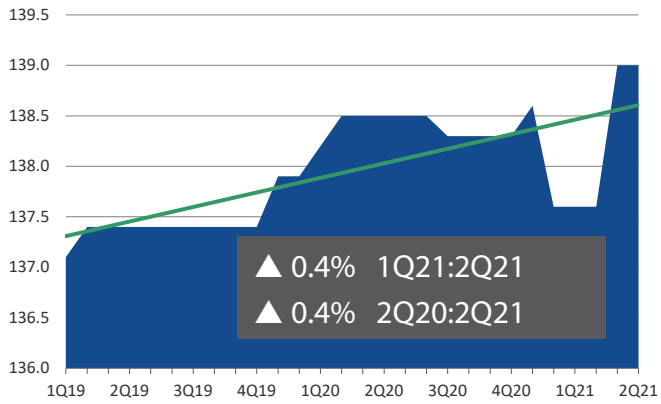
Belt – Conveyor/Transmission

- Conveyor belt pricing has continued to steadily increase 1Q2021 and 2Q2021.
- Transmission Belt pricing dropped in 1Q21 but spiked again 2Q21.

Conveyor Belt



Transmission Belt

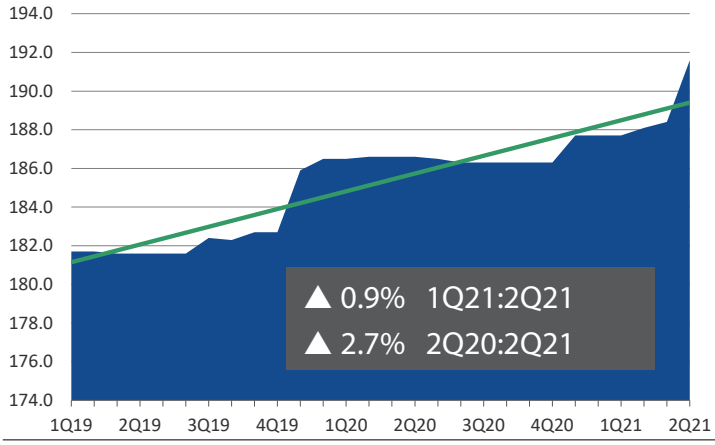


Quarterly Pricing Trends:

Seals & O-Rings

- The Seals & O-Rings pricing index spiked twice in 2021 with the largest occurring in 2Q21.
- Pricing over all of 2020 was relatively flat for Seals & O-Rings.

Seals & O-Rings



The indices above are derived from the Producer Price Index, published monthly by the U.S. Bureau of Labor Statistics, which measures the average change over time in selling prices received by domestic producers for their output. The prices included in the PPI are from the first commercial transaction for many products and some services. The data from the Producer Price Index tracks wholesale prices, making this index the best source of price trend data for wholesale distribution markets.

Annual Market Size – Rubber Products

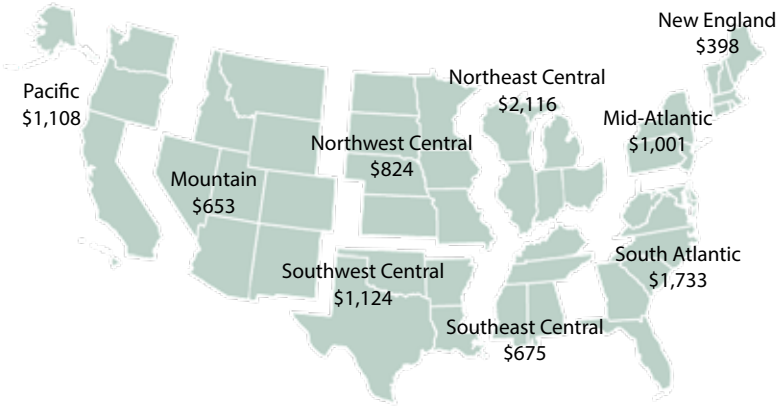
The annual market size decreased from Q2 2020 to Q2 2021 for the five industrial product categories listed below and is estimated at $9.6 billion.

Product Categories	2021 Estimated Market Size (in $ Millions)	Annual % Change 2Q20:2Q21
Hydraulic Hose	$2,097	- 0.9%
Industrial Hose	$2,315	-1.5%
Conveyor Belt	$1,801	-5.1%
Transmission Belt	$769	-1.4%
Seals & O-Rings	$2,651	-3.3%
Total Market Potential	$9,633	-2.6%

Source: MDM Analytics

Annual Market Size – Regions/Top 10 States (2021 data)

National Rubber Products Market Size = $9.6 Billion



(in $ Millions)

State	Total Demand
Texas	$776
California	$747
Michigan	$520
Ohio	$503
Illinios	$451
Pennsylvania	$415
Florida	$408
Wisconsin	$370
New York	$369
Georgia	$337

All market size analysis in this report is based on five product categories defined at the end of this report. The data reflect estimates of end-use consumption, on an annual basis in U.S. dollars, for maintenance, repair, and operations (MRO) and original equipment manufacturer (OEM) business segments.

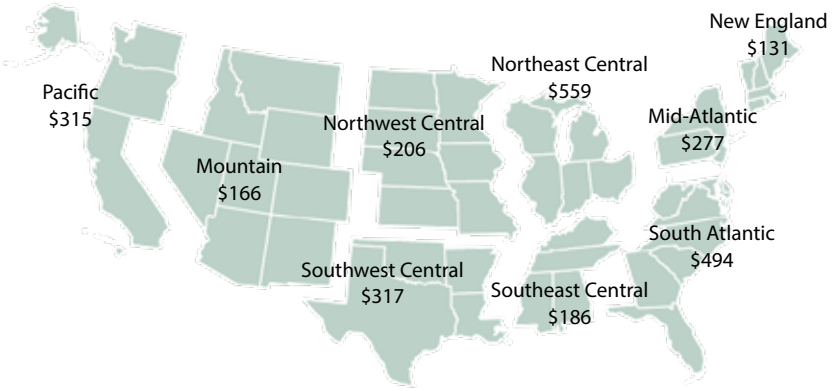
Each quarter, this page profiles a different product category to provide a more in-depth look at the size and make-up of the key customer segments for that category.

Market Size Profile – Seals & O-Rings

The size of the U.S. Seals & O-Rings market is $2.7 billion, according to estimates by MDM Analytics. This page profiles how demand for Seals & O-Rings segmented regionally, across the top 10 states by demand, and the top 10 customer sectors that consume Seals & O-Rings products. Market size is defined as the total available market at the end-user customer level, including a distributor margin estimate, to provide a "street" price estimate, in U.S. dollars.

Market Size – Regions/Top 10 States (2021 data)

Seals & O-Rings Market Size = $2.7 Billion



State	(in $ Millions) Total Demand
Texas	$216
California	$211
Ohio	$146
Illinios	$117
Florida	$115
Michigan	$113
Wisconsin	$112
New York	$111
Pennsylvania	$110
North Carolina	$98

Annual Market Size – Top 10 Customer Segments (2021 data)

NAICS 6	Description	Seals & O-Rings (in $ Millions)	Accounts
322121	Paper (except Newsprint) Mills	262	1,939
332710	Machine Shops	120	20,216
237310	Highway, Street, and Bridge Construction	91	28,457
238210	Electrical Contractors and Other Wiring Installation Contractors	86	116,425
322130	Paperboard Mills	76	642
236220	Commercial and Institutional Building Construction	65	55,502
238110	Poured Concrete Foundation and Structure Contractors	52	37,233
336412	Aircraft Engine and Engine Parts Manufacturing	49	1,216
336411	Aircraft Manufacturing	43	2,375
238910	Site Preparation Contractors	42	39,190

Product Category Definitions

The market analysis in this report defines the following five product categories in the following manner, using standardized classifications based on the U.S. Census Bureau's NAICS product codes, as well as the U.S. Bureau of Labor Statistics (BLS) Producer Price Index Commodity Codes. See Methodology and Data Sources below for more detail.

Hydraulic Hose – This category is defined by BLS as All Other Hydraulic/Pneumatic Hose.

Industrial Hose – This category is defined by BLS as Industrial Rubber/Plastics Hose.

Conveyor Belt – This category is defined by BLS as Flat Rubber/Plastics Belts and Belting.

Transmission Belt – This category is defined by BLS as Rubber/Plastics Belts and Belting, except flat rubber, including motor vehicle rubber/plastics transmission belts and belting.

Seals & O-Rings – This category is defined by BLS as Packing and Sealing Devices, which includes compression packings, molded packing and sealing devices, rotary oil seals, and axial mechanical face seals and parts.

Regional Territory Definitions

This report uses the nine statistical divisions defined by the U.S. Census Bureau. States included in each division:

Division 1: New England
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Division 2: Mid-Atlantic
New Jersey, New York, Pennsylvania

Division 3: Northeast Central
Illinois, Indiana, Michigan, Ohio, Wisconsin

Division 4: Northwest Central
Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

Division 5: South Atlantic
Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia

Division 6: Southeast Central
Alabama, Kentucky, Mississippi, Tennessee

Division 7: Southwest Central
Arkansas, Louisiana, Oklahoma, Texas

Division 8: Mountain
Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming

Division 9: Pacific
Alaska, California, Hawaii, Oregon, Washington

Methodology & Data Sources

The data in this report was compiled by MDM Analytics, formerly Industrial Market Information, Inc., a subsidiary of Gale Media, Inc., Niwot, CO, using an econometrics model developed more than 30 years ago. MDM Analytics' databases provide information on the potential demand for a wide range of key industrial goods across the hundreds of industries encompassed by the North American Industry Classification System (NAICS) system for North America. The following is a general overview of the methodology used to develop MDM Analytics' key reports.

All market analysis in this report is based on five product categories defined above. The data reflect estimates of end-use consumption, on an annual basis in U.S. dollars, by maintenance, repair, operations and production (MROP) accounts, and original equipment manufacturer (OEM) accounts.

First, a total market size for each product category is established using the U.S. Census Bureau's five-year Economic Census together with its Annual Survey of Manufacturers. This mandatory survey of U.S. manufacturers is conducted at a granular product level using standardized NAICS-based product codes, which MDM Analytics aggregates into specific product class and category groupings. Imports-Exports are then factored and a distributor margin is added to estimate an end-user customer, or "street-level," market sizing nationally.

Consumption rates for MRO products at a given account location are largely driven by the type of manufacturing or unique industry-sector processes and number of employees at a location. This demand relationship can be used to model market potential for defined territories at the county level and higher based on a territory's unique composition of industries and the number of employees in those industries.

Continued next page

MDM Analytics' proprietary statistical model segments the national demand for each product category based on its unique historical consumption patterns by each 6-digit NAICS industry sector. Then the total employment of each industry is divided into the total annual market size to arrive at the dollar-per-employee ratio. Market potential can then be estimated by modeling the types of end-market industries and their size in a given territory. In effect, the "DNA" of a territory and its estimated consumption patterns for defined industrial product categories can be estimated.

This NAHAD Markets Monitor report updates market size estimates annually based on change in employment by sector at a county level, as well as a proprietary model using a number of industry sector indices for manufacturing, construction, mining and energy sectors. U.S. employment is measured by 6-digit NAICS industry sector at a county level, sourced through a combination of U.S. Bureau of Labor Statistics, Dun & Bradstreet and private databases. Annual market size estimates are revised with additional input and validation from annual

Quarterly Pricing Trends Methodology

Data presented here provide a snapshot in time of wholesale pricing trends in five common industrial product groups sold by NAHAD members. The report provides comparison of the latest quarterly data with the previous quarter and the same quarter of the previous year.

The NAHAD Markets Monitor quarterly pricing trends report is based on the Producer Price Index (PPI) published by the U.S. Bureau of Labor Statistics. Quarterly percent change, which is not reported by the U.S. government, is calculated by MDM editors based on quarterly averages using a method developed after consulting with the BLS.

The PPI program measures the average change over time in selling prices received by domestic producers for their output. The prices included in the PPI are from the first commercial transaction for many products and some services. The data from the Producer Price Index tracks wholesale prices, making this index the best source of price trend data for the wholesale distribution market. The PPI does not measure the cost of producing an item.

Indexes are organized in three major structures: stage of processing (organized by class of buyer and degree of fabrication); industries and their products (organized by producing industry as defined by NAICS); and type of commodity (organized by similarity of end use or material composition).

To calculate its item-specific index each quarter, MDM uses the PPI organized by commodity. This provides the greatest detail for specific products. It also provides a great deal of historical data. The downside to the commodity index coding system is that no other governmental statistical program uses it. Commodities are grouped according to similarity of material composition and end use, regardless of industry of origin. Because of this, they are not organized by NAICS (North American Industry Classification System).

In addition, when using the commodity indexes, it is inadvisable to roll up products into one overarching index without accounting for double-counting due to stages of processing. This is why MDM presents data at a lower level and as close to an individual product basis as possible, rather than presenting a total index for the products. For overall percent changes by industry (NAICS) or level of processing (crude vs. finished, for example), businesses should use the stage of processing or industry indexes at www.bls.gov/ppi.

How Firms Use the Producer Price Index
According to the BLS, businesses often employ price adjustment clauses in long-term sales and purchase contracts, frequently using the PPI family of indexes, either alone or in conjunction with other sources of economic data. Because the PPI indexes measure price changes objectively, the PPI calculated by the Bureau of Labor Statistics are widely recognized among businesses, economists, statisticians and accountants as useful for this purpose.

MDM Analytics does not encourage or discourage the use of price adjustment measures in purchase and sales agreements.

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