

# PLASTICS MANUFACTURING

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Applications in Everyday Life



**PREMIER PARTNER**

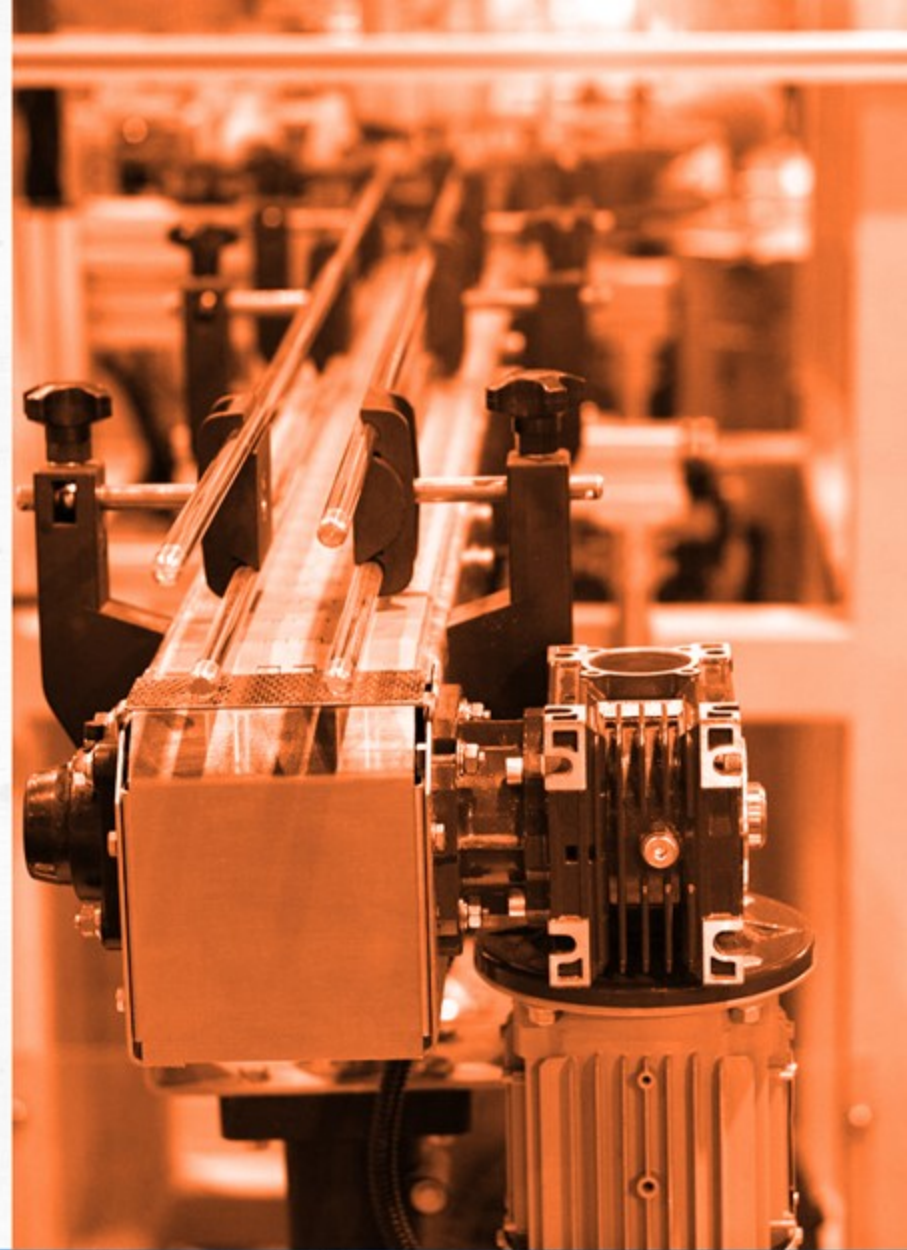


## PRESENTING PARTNERS



"Today nearly everyone, everywhere, every day comes into contact with plastics. They have become the workhorse material of the modern economy due to several reasons: availability, versatility, but above all they are virtually unrivalled in terms of great performance at low cost."

~ [WeForum.org](http://WeForum.org)



# PLASTIC MANUFACTURING FACTS

(NATIONAL DATA)

**1** Plastics is the 3rd largest manufacturing industry in the United States.

**2** Almost 2 million people are employed in the plastics industry.

**3** The average salary of all workers in the plastic industry in 2020 is \$52,000.



**4** The top three largest sectors utilizing plastics are packaging, building and construction, and automotive.

**5** Plastics are up to 12 times stronger than steel, making cars safer, lighter, and more fuel efficient.

**6** For every 10% reduction in weight, a vehicle will normally save 5 – 7% in fuel usage. For every 1lb of weight eliminated from a vehicle 25.3lbs of carbon dioxide is saved over the life of the vehicle.

**U.S.  
PLASTICS  
MFG FACTS**





## TYPES OF PLASTIC MANUFACTURING

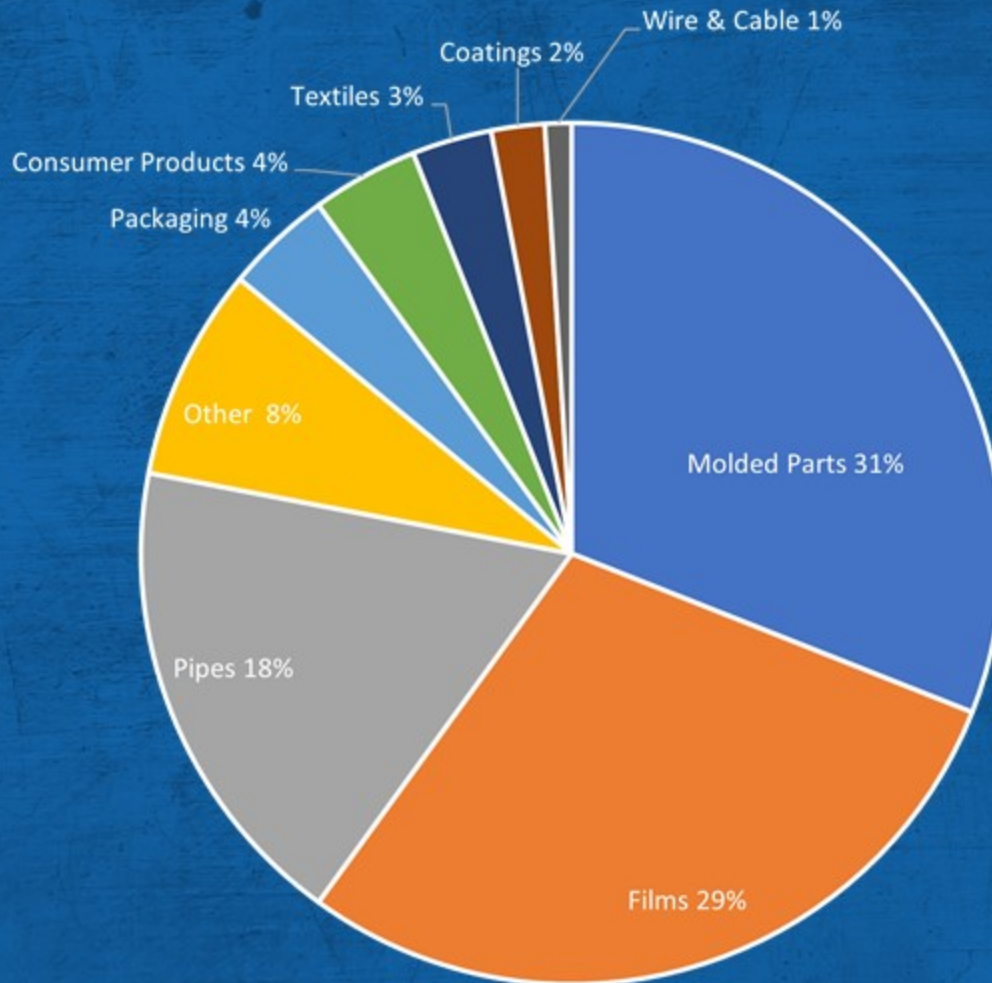
- Injection Molding
- Plastic Part Design
- Medical
- Plastics/Resins
- Tooling/Molds
- General Manufacturing
- Metal-to-Plastic
- Scientific Molding

# INDUSTRIES DEPENDENT ON PLASTICS

- Construction
- Manufacturing, durables
- Manufacturing, nondurables
- Products made of paper and paperboard
- Health care providers
- Food service industry



# DISTRIBUTION OF PLASTIC PRODUCTION IN U.S.



Source: <https://www.statista.com/study/54067/us-plastics-industry/>



2019

# INDIANA PLASTIC MANUFACTURING FACTS

**1** Indiana ranked 7<sup>th</sup> in plastics industry employment in the United States.

**2** The average salary for workers in the Plastics Industry was \$48K.

**3** The plastics industry directly employed 35,596 people in Indiana.

**4** Industry shipments in Indiana totaled more than \$19 billion and comprised 4.4% of national shipments.

Source: <https://www.plasticsindustry.org/factsheet/indiana>



2019

# MICHIGAN PLASTIC MANUFACTURING FACTS

**1** Michigan ranked 4<sup>th</sup> in plastics industry employment in the United States.

**2** The average salary for workers in the Plastics Industry was \$54K.

**3** The plastics industry directly employed 49,294 people in Michigan.

**4** Industry shipments in Michigan totaled more than \$22.9 billion and comprised 5.3% of national shipments.

Source: <https://www.plasticsindustry.org/factsheet/michigan>



# PLASTICS IMPACT ON MEDICINE

- Plastics are impermeable to germs, making it vital in preventing the transmission of disease & patient infection.
- Plastics are used in surgical devices like modern pacemakers, stents, & joint replacement due to its ability to adapt to the tiniest and most intricate molds.
- Researchers have transplanted external 3D printed ears for children who had birth defects leaving their ears undeveloped.
- Plastics are the main material used in prosthetics, creating patient specific devices that are lighter and more flexible.



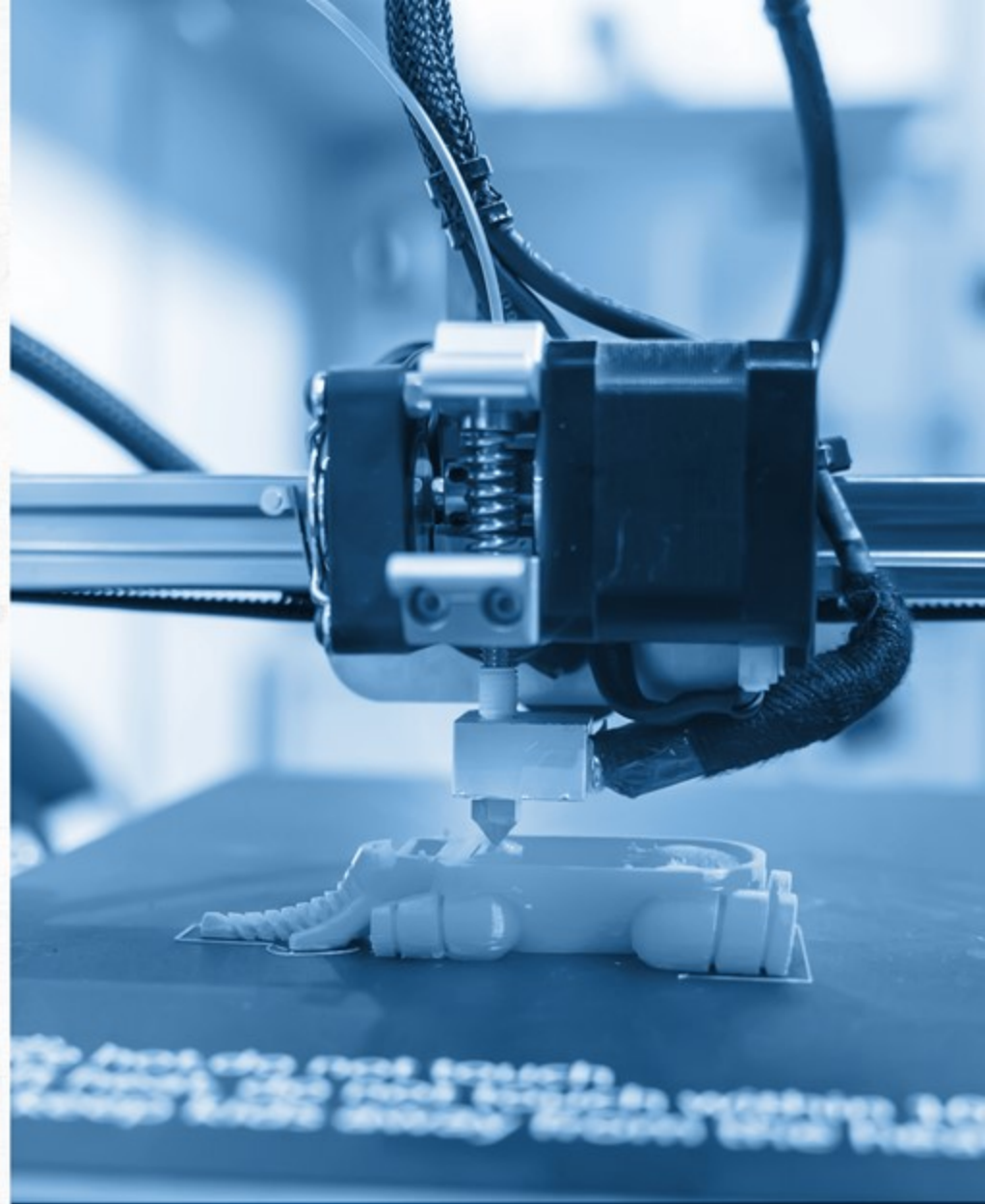


## PLASTICS AND THE AUTOMOTIVE INDUSTRY

- By 2025, the automotive plastics market is expected to reach \$68.58 billion.
- Average vehicle consists of 5–10% of plastics in terms of overall weight.
- Companies that focus on automotive plastics will have a demand for engineers.
- Plastics lower production costs, advance modular assembly practices and improve the aerodynamic properties of car exteriors.

# PLASTICS 3D PRINTING FACTS

- The worldwide market for 3D printed products and services is anticipated to exceed \$40 billion by 2024.
- Metal, Plastic, and Resin can all be used in 3D printing.
- Used in films to design characters, props, and costumes – Iron Man's suit was 3D printed!
- Can be used in space to create zero gravity adaptive tools and to build habitats to live on Mars or the Moon.





**THANK YOU TO OUR REGIONAL CHAMPIONS!**

**GREATERNILES**  
Chamber of Commerce

**MICHIGAN**  
**WORKS!**



# RESOURCES

<https://www.plasticsindustry.org/>

<https://www.plasticsindustry.org/factsheet/indiana>

<https://www.plasticsnews.com/perspective/2020-plastics-industry-talent-trends>

<https://www.plasticstoday.com/automotive-and-mobility/six-trends-impacting-global-automotive-plastics-market-new-decade>

<https://www.kaysun.com/blog/plastics-industry-trends-2020>

<https://seaelectplastics.com/news/why-the-medical-industry-is-focused-on-plastic-parts/>

<https://datausa.io/profile/naics/plastics-product-manufacturing#:~:text=On%20average%2C%20employees%20in%20the,total%20of%20269%20Industry%20Groups.>

<https://www.weforum.org/agenda/2019/10/plastics-what-are-they-explainer/>

<https://mep.purdue.edu/news-folder/purdue-mep-s-partnership-with-city-of-south-bend-companies-results-in-new-skills-and-improved-efficiencies/>

<https://www.statista.com/topics/5266/plastics-industry/>

[https://www.mpo-mag.com/contents/view\\_online-exclusives/2017-10-09/5-ways-plastics-revolutionized-the-healthcare-industry/](https://www.mpo-mag.com/contents/view_online-exclusives/2017-10-09/5-ways-plastics-revolutionized-the-healthcare-industry/)

<https://www.sciencedirect.com/science/article/pii/S2352396418300161>

<https://xponentialworks.com/3d-printing-is-changing-lives-with-personally-printed-prosthetics/>

<https://agsplasticgranulation.co.uk/opinions/the-importance-of-plastic-why-plastic-is-important/>

