



ASSOCIATION OF
OHIO RECYCLERS

The State of EPS Recycling

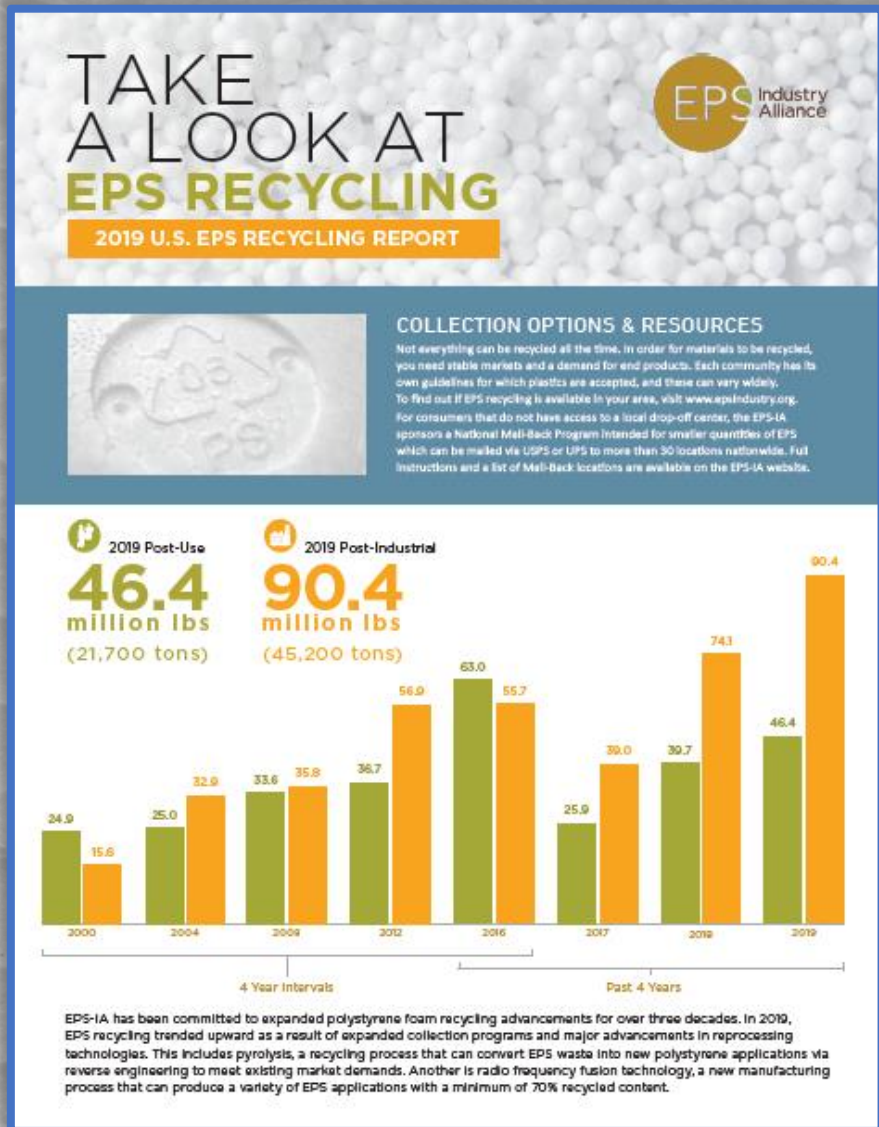


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EPS Foam – State of Recycling



EPS stands for Expanded Polystyrene which is also known as Styrofoam a TM of **DowDuPont**

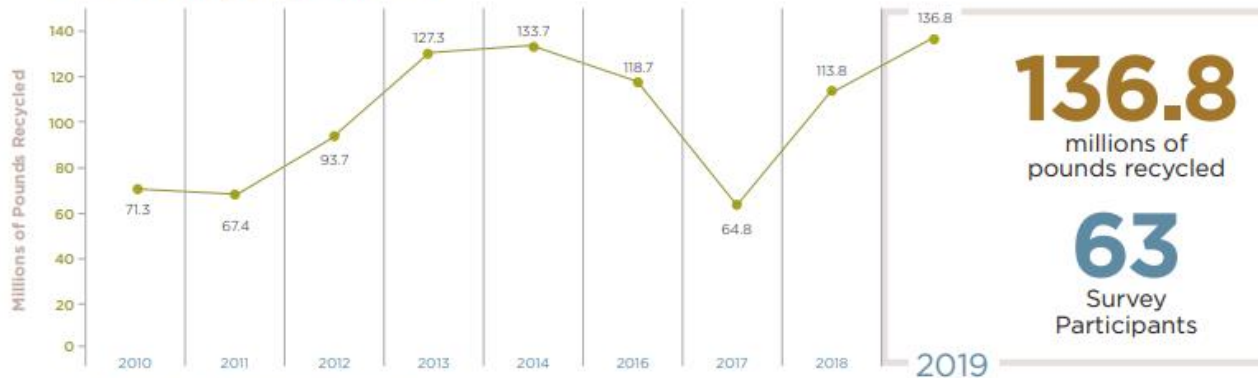
Myth – EPS aka Styrofoam is not recyclable.

Expanded polystyrene (EPS) is a unique plastic material that can be reincorporated back into its original manufacturing process. This allows the EPS manufacturers to use recycled polystyrene as a feedstock replacement when making new products. There are some applications, like food contact containers, that are unable to use post-use feedstocks because of FDA concerns with chain-of-custody for materials recaptured from the solid waste stream or product distribution channels. However, other applications can easily incorporate 20% recycled content and when properly engineered, performance specifications can be met at up to 50% recycled content.

2019 EPS Recycling Report



U.S. EPS Recycling 2010-2019*



*Data not collected in 2015 due to lack of respondents

Pounds collected in 2017 dropped significantly due to the Green Sword, but quickly bounced back & after three years is now beginning a new growth trend.

- Based on total pounds reported by those that responded to the recycling survey, the recycling rate for 2019 was 26.4% for post-use EPS.
- In 2019 EPS-IA received responses from 63 out of 142 known recyclers, meaning the data represents 44% of EPS recycling locations surveyed.
- EPS-IA estimates the total recycling pounds reported conservatively represents 60-70% of all EPS collected in 2019.
- EPS-IA does not publish a recycling rate due to its potentially misleading nature:
 - to reflect increased recycling achievements from previous years due to higher production rates; or
 - to give the appearance of over-inflated percentages due to lower production rates than previous years.

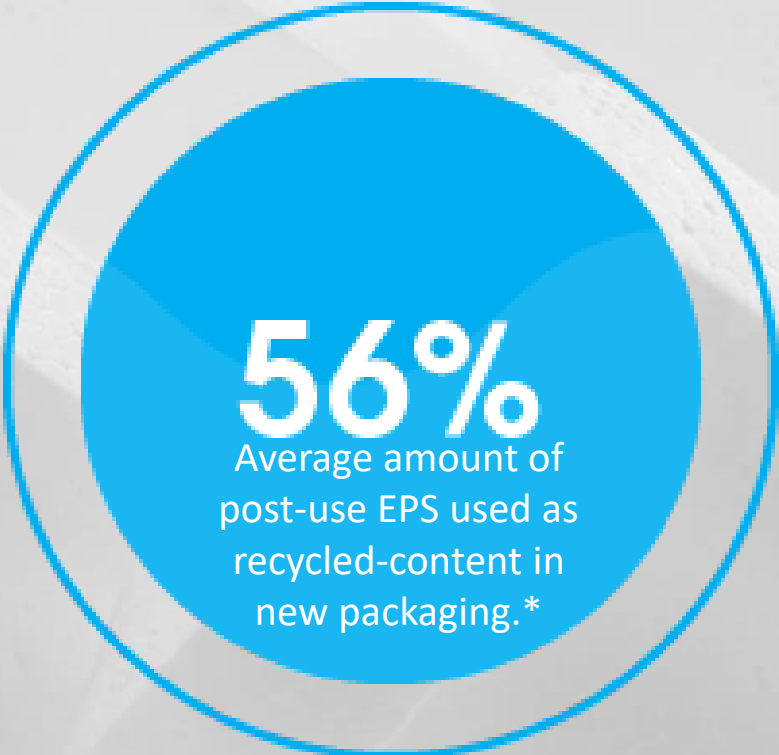
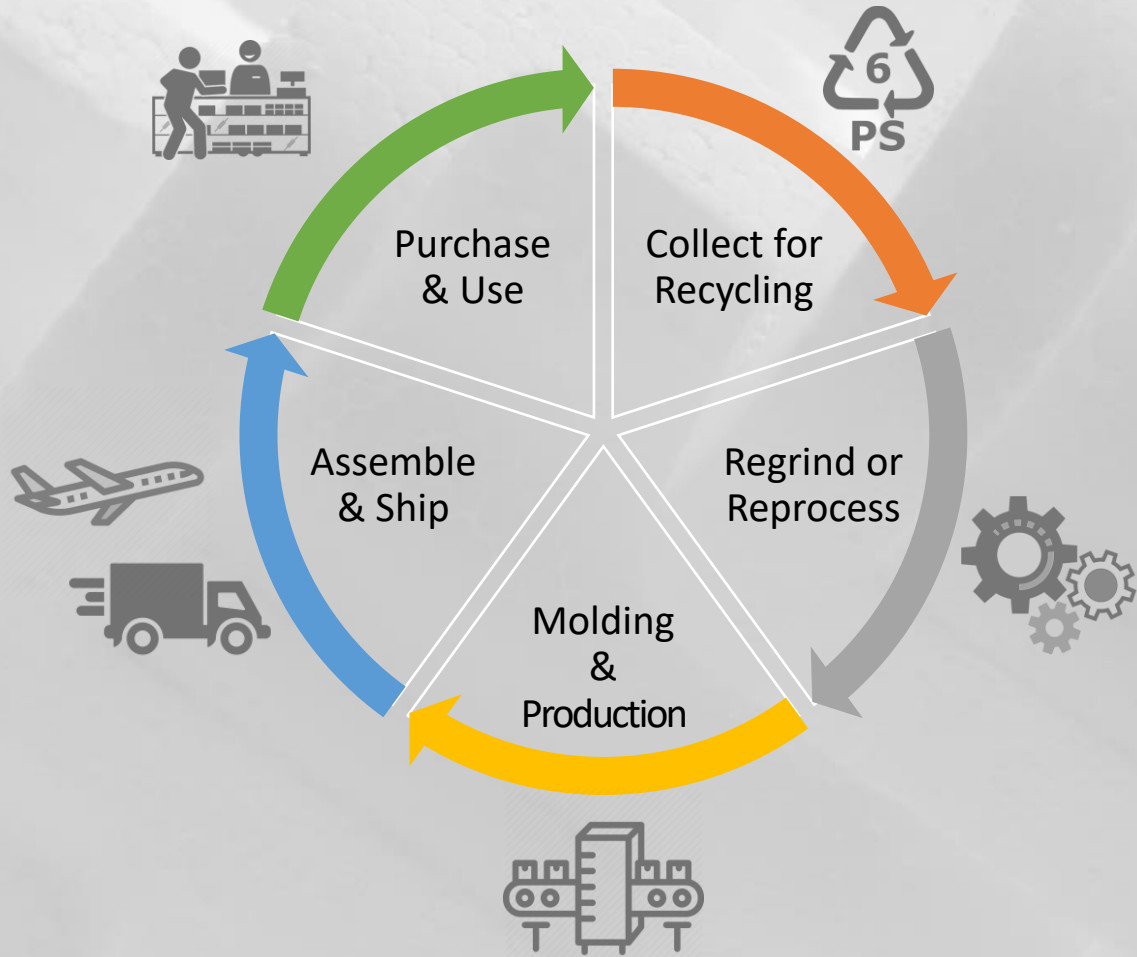


Expandable Polystyrene is easily used as 'regrind' feedstock replacement to produce $\geq 20\%$ recycled-content EPS packaging.

Unexpectedly Circular



EPS Recycled Content Circular From Day One



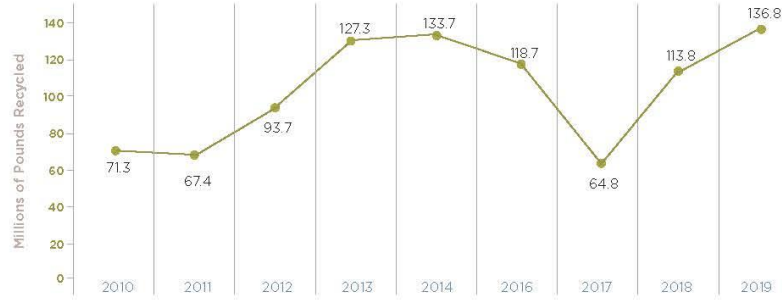
EPS manufacturing facilities collect EPS waste material from consumer drop-off, retailers & end users. To the extent possible & dependent on supply & demand, recycled content is incorporated into new packaging. EPS-IA estimates that in **2019 ~25 million pounds was used as recycled content** EPS packaging.

** Based on data from the 2019 U.S. EPS Recycling Report*



RECYCLABLE

U.S. EPS Recycling 2010-2019*

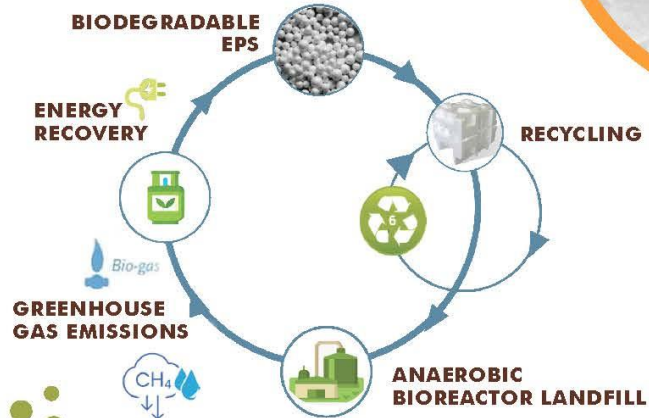


136.8 MILLION POUNDS RECYCLED IN 2019

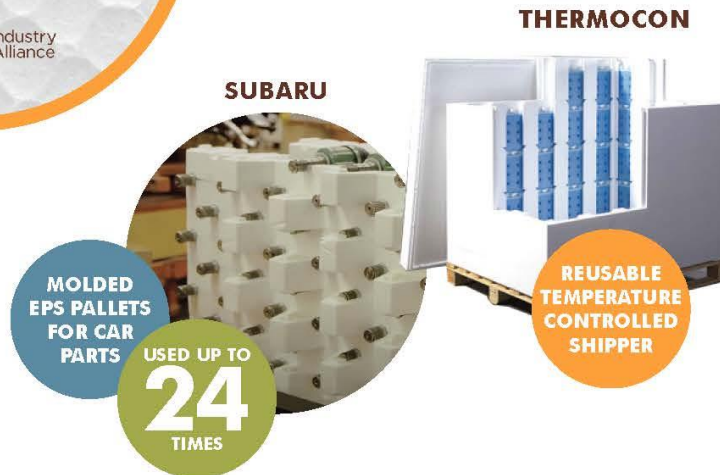
RECYCLED CONTENT



EPS TRANSPORT PACKAGING CIRCULAR ECONOMY



BIODEGRADABLE



REUSE



Advanced EPS Recycling Innovations

The Tipping Point for Contaminated Plastics Recycling

- Advanced recycling is a collection of technologies that enable a new way of plastic recycling.
 - Purification
 - Decomposition/Depolymerization
 - Conversion
- Promising solutions to dramatically increase plastic waste recycling.

Polystyvert

Polystyrene Recycling

*Recognized by World Economic Forum
as a technology pioneer 2020.*



PYROWAVE

*"Plastics waste is the new crude oil".
Jocelyn Doucet, Chief Executive Officer*

"This measure offers an innovative way to manage hard-to-recycle plastics, which not only will reduce waste but also support an emerging recycling industry."

- PA Governor Tom Wolf

Nine states have passed
Advanced Recycling Bills:

Ohio Florida
Georgia Wisconsin
Iowa Tennessee
Texas Pennsylvania
Illinois

The State of EPS Recycling in Ohio

Eco Development Drop off Center – Mason, OH

- Welcome Residential, Manufacturers, and Retail foam.

City of Hilliard – Drop off Center – <https://hilliardohio.gov/styrofoam-recycling/>

- City of Dublin - <https://dublinohiousa.gov/styrofoam-recycling/>

Drop off Events in '21 and '22

- Montgomery County
- Keep America Beautiful
- Centerville, OH
- Hilliard, OH

County Involvement/Participating

- Montgomery County - <https://www.montgomeryohio.gov/recycle-your-styrofoam-eps-locally/>
- Warren County – Drop off
- Clark County – Drop off

Ohio EPS Manufactures that re-consume and or recycle

- Plasti-Fab – Lebanon, OH
- Foam Holdings – Lancaster, OH (Formally FPM)
- Global Foam – Dayton, OH

#1 Goal: Remove EPS from the waste stream and steer the material into the Circular Economy

Areas of Opportunity

- Public and Private Drop off locations. Increase access to recycling.
- Manufacturing participation – Limited space for equipment, encourage drop off.
- Education: All kinds, Drop off events, Media push through social and traditional
- Ohio Universities -14 four-year public universities with 24 branch campuses, 23 two-year community and technical colleges and more than 50 four-year private colleges and universities. **“just over 500,000 students enrolled in spring 2022, per the National Student Clearinghouse Research Center”**
- Hospitals – Cold storage packaging
- Capture Appliance and Furniture delivery scrap (EPS and Cardboard)
- Encourage usage of Grants – AOR, SWACO, Ohio EPA and Foam Recycling Coalition

Final Thought: Demand for EPS recycled content is here to stay therefore markets will continue to grow and require more of this valuable commodity.