Moving the needle on plastic waste is no small feat, but petrochemical manufacturers are revolutionizing what's possible. Advanced recycling technologies utilize advanced processes that break plastic waste all the way down to its original chemical components - expanding the types of plastics that can be recycled, and creating a higher-quality feedstock. Check out our infographic below to learn the difference between mechanical recycling and advanced recycling technologies.

mechanical recycling

melts & re-molds discarded plastic to form new products

OPPORTUNITIES
easier to process

CONSIDERATIONS
limited types of used plastic can be recycled. degradation of polymers

used plastic

gets sorted by type

gets seriously deep-cleaned

shredded into a million pieces

melted down and turned into things like

advanced recycling technologies

use heat and/or chemistry to break down polymers to their building blocks or feedstocks for new plastic

OPPORTUNITIES
wider variety of plastics can be repeatedly recycled into high-performance applications

CONSIDERATIONS
more complex process and requires high energy

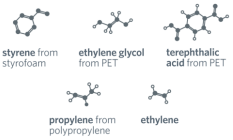
used plastic

gets sorted by type

gets seriously deep-cleaned

shredded into a million pieces

gets heated up (like really really hot) with no oxygen through a process called pyrolysis, which is one of many advanced recycling processes



and breaks apart at the weakest point (the monomer), which become the building blocks for brand new plastic, like

The plastic waste crisis **requires multiple solutions.**
Mechanical and advanced recycling **work together as a complimentary approach** to tackling plastic waste in a meaningful and effective way.

AFPM

Print as PDF:

Topics

Products & Innovation