



Life Cycle Assessment

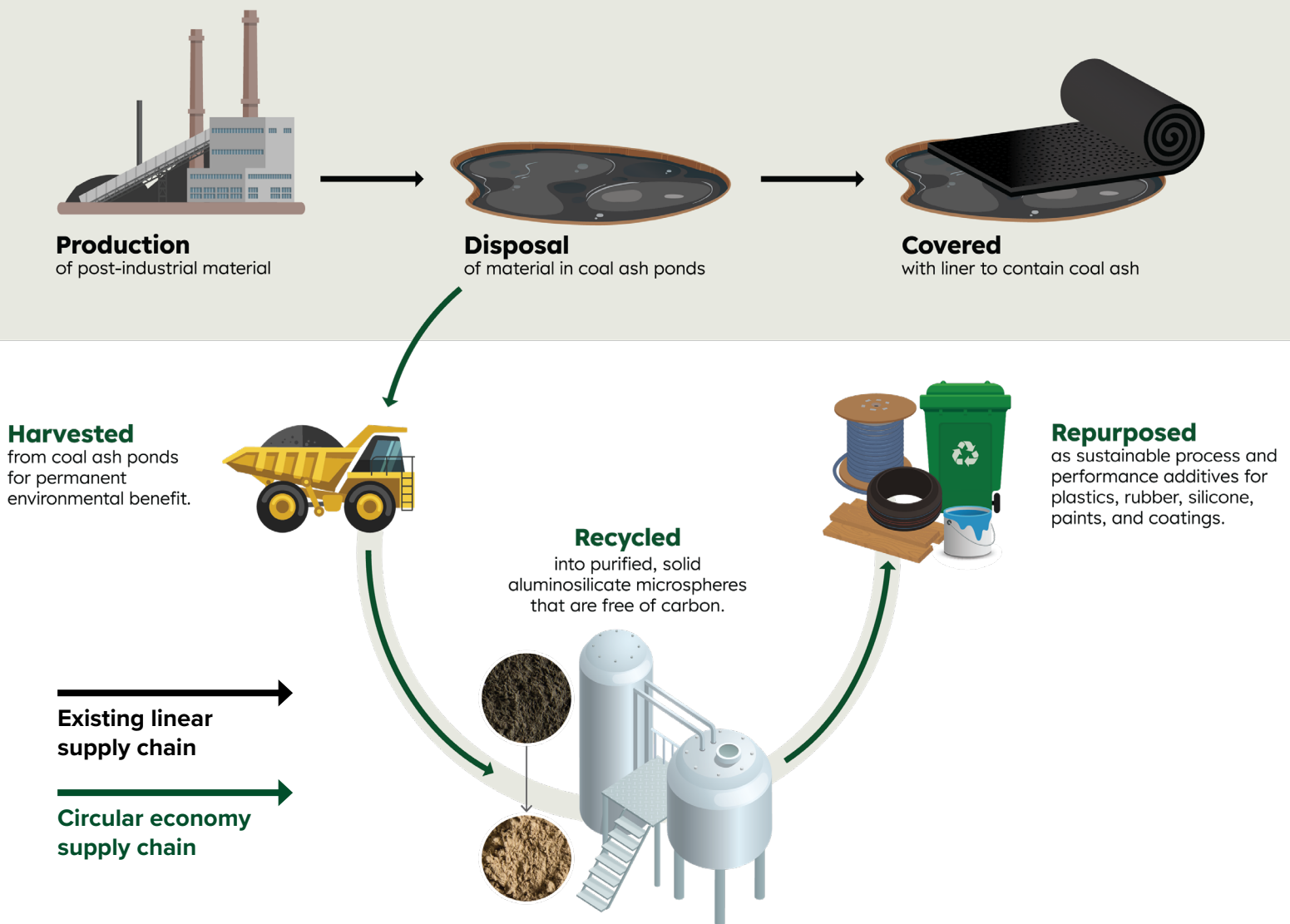
Reducing Environmental Risks and Emissions
through Post-Industrial Reclamation



We are committed to environmental stewardship and contribute to our customers' sustainability goals.

Spherix recycles post-industrial material from third party impoundments that would have otherwise gone into landfills. Patented recycling technology beneficiates the post-industrial material into consistent, aluminosilicate ceramic microspheres. Removing this material permanently from ground storage and recycling it for beneficial use in other industries is the best sustainable solution for people and the environment.

Circular Economy Supply Chain



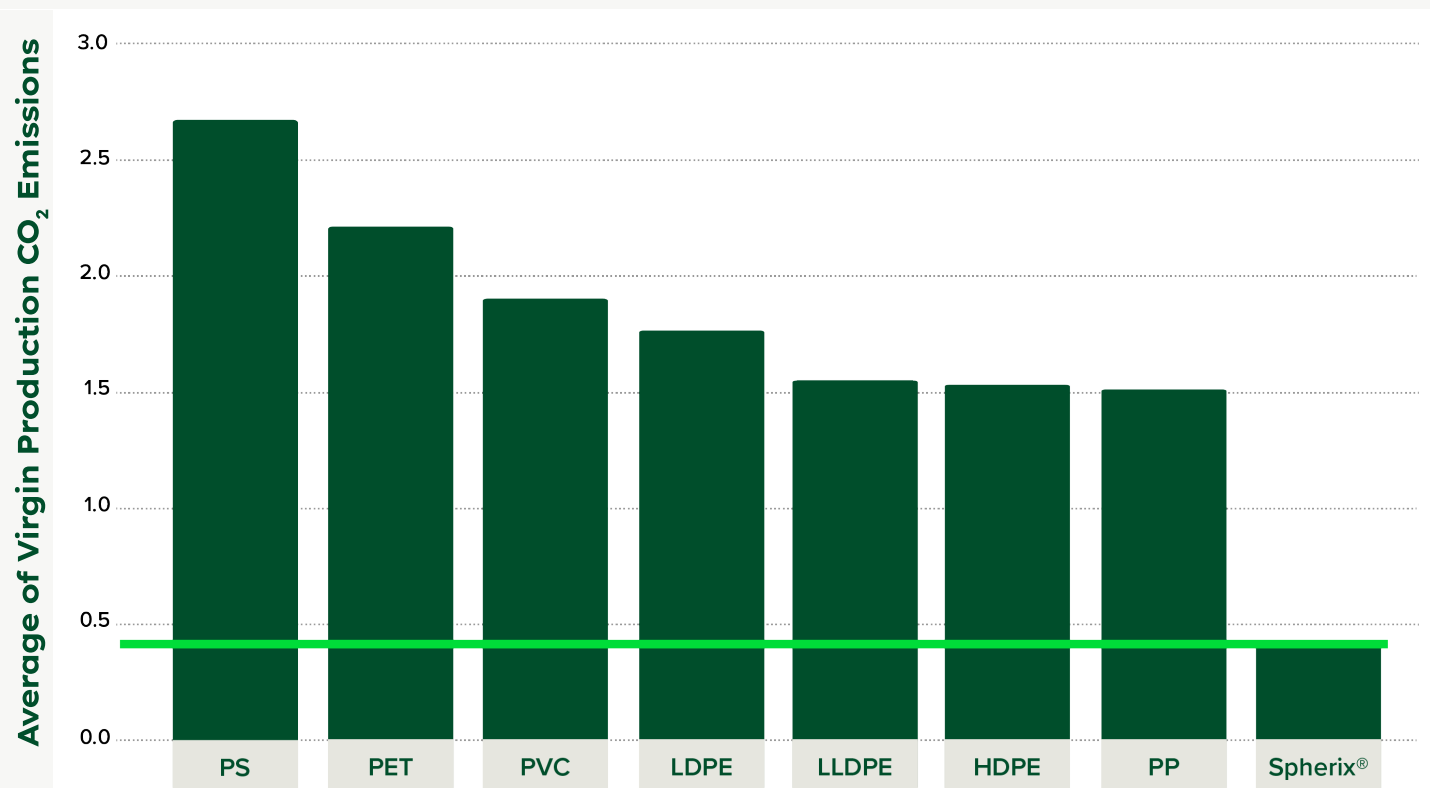
The US EPA encourages the beneficial use of CCRs in an appropriate and protective manner because this practice can produce positive environmental, economic, and product benefits, such as lower greenhouse gas emissions.

CO₂ Emissions

The recycling technology emits 0.4 tons of CO₂ per ton of Spherix product. This number is derived from the EPA's WARM Model. Spherix provides a decrease in total CO₂ emissions when used in a formulation. In addition, Spherix's shape and performance characteristics typically result in a 10-20% reduction of processing energy and lower greenhouse gas emissions.

Carbon Emission Reduction

Average of Virgin Production CO₂ Emissions by Plastic



Recycled and Repurposed

Spherix processes and repurposes coal combustion residuals (CCRs) into performance additives for plastics, rubber, paints, and coatings.



Environmental Benefit

Harvesting CCRs from ground storage and processing the material into 100% post-industrial ceramic microspheres is a sustainable solution.



Better - Stronger - Faster

Adding Spherix can make processing more efficient, reducing costs and energy footprints for more profitable and sustainable manufacturing.



Resources

1. EPA

- a. Warm Model Version 15

2. Electric Power Research Institute (EPRI)

- a. “Quantifying the Benefits of Using Coal Combustion Products in Sustainable Construction”

3. ISO 1444

- a. “Environmental management – Life Cycle assessment – Requirements and guidelines”