Top 5 Takeaways from the Chemical Recycling Webinar

Speakers from Green Mantra, PureCycle, Pyrowave moderated by Alan Blake PAC NEXT US Director

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1 Plastic waste is a huge global issue.

- Worldwide more than 260 million tons of plastic waste is generated per year.
- Only 12% of plastic waste is recycled.
- Packaging represents 50% of plastic production with a typical lifespan of only 6 months.

2 Consumers expect packaging and products to be recyclable and contain recycled content.

Numerous studies indicate that consumers expect their products and packaging to offer value, performance AND sustainability with no compromises. At a minimum the package is expected to be recyclable or compostable and now there is a growing expectation that it should also have recycled content.

3 Chemical Recycling closes the loop in the circular economy to create products of higher value and functionality.

Chemical Recycling fully closes the loop in the reuse of contaminated, hard to recycle plastics while making recycled plastics more accessible at scale to companies desiring to use a sustainable, recycled polymer or additive. 92% of our webinar attendees agreed that chemical recycling has the capability to produce new resins & products of equal quality to virgin materials and 8% were concerned that they would be more expensive.

4 There is a wide range of Chemical Recycling technologies that can upcycle contaminated plastic waste.

- Green Mantra uses a thermo-catalytic process for controlled depolymerization to create speciality polymers and additives that meet specific performance requirements for industrial applications e.g. roofing, paving, plastic composites and plastic processing.
- PureCycle uses a patented recycling process, developed by Procter & Gamble, that separates color, odor and any other contaminants from plastic waste feedstock to transform it into ultra-pure recycled polypropylene.
- Pyrowave has developed a patented technology—the Catalytic Microwave Depolymerization—for the local processing of mixed plastics, including polystyrene, into a raw material identical to the original feedstock, to be reused by the chemical industry in new plastics manufacturing.

5 Challenges and actions to help Chemical Recycling thrive as part of the circular economy.

- Investment is needed in plastic collection/sorting infrastructures to increase volume of plastics available for chemical recycling companies;
- Support for compensation programs for plastic collection, sorting and conversion to make feedstock price competitive with crude;
- Investment in new technology companies to support growth and scale-up and make chemical technologies price competitive;
- Incentives to increase recycled content in products and facilitate deployment of new technologies in the market.

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