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COMPOSTABLE POLYMERS FOR HIGH-TACK PRESSURE-SENSITIVE HOT MELT ADHESIVES

Across the landscape of adhesives, change is happening rapidly, with biobased and renewable content becoming increasingly important. By taking a mass balance approach or using high amounts of rosin esters, there are ways to increase bio content. Few, if any, thermoplastic adhesives provide the potential for compostability or biodegradability in nature, however. Lactic acid-based copolymers may offer potential solutions; it has been shown that, with careful copolymer design and raw material selection, we can meet industrial, and in some cases home, compostability requirements while maintaining or improving adhesive performance.

Corbion is a world-leading producer of lactic acid. Leveraging the fermentation of sugars, we manufacture lactic acid that is certified biobased and has a negative carbon footprint (cradle-to-gate LCA). By combining this biobased building block with comonomers, we can create thermoplastics featuring compelling properties for hot melt adhesives. Our strength lies in the designing of copolymers that deliver adhesive performance while also enabling end-of-life options and use of biobased content.

This presentation will explore the advantages of lactic acid as a monomer, the properties of resulting copolymers, and the value they can bring to our customers. Emphasis will be placed on high-tack, pressure-sensitive adhesive polymers, formulations, and their envisioned applications.