

Polyester Polymer Particles Having A Small Surface To Center Molecular
Weight Gradient

ABSTRACT

There is now provided a polyester polymer particle having an It.V., a surface, and a center, wherein the It.V. at the surface of the particle is less than 0.25 dL/g higher than the It.V. at the center of the particle. The polyester polymer particle is desirably crystalline to prevent the particles from sticking to each other while drying, and desirably contains less than 10 ppm acetaldehyde. A polyester container, preferably a preform or beverage bottle, is made by feeding crystallized polyester particles having an It.V. of at least 0.70 dL/g to an extrusion zone, melting the particles in the extrusion zone to form a molten polyester polymer composition, and forming a sheet or a molded part from extruded molten polyester polymer, wherein at least a portion of the polyester particles have an It.V. at their surface which does not vary from their It.V. at their center by more than 0.25 dL/g, and the particles have not been solid state polymerized. Such polyester compositions have an It.V. suitable for containers, yet lose less It.V. during melt processing than existing polyesters.

NO FIGURE