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(54) Title: INTERPOLYMER RESIN PARTICLES

(57) **Abstract:** Interpolymer resin particles comprised of 20% to 60% by weight of uncross-linked polyolefin e.g. polyethylene, polypropylene, and from 40% to 80% by weight based on the weight of the particles of a vinyl aromatic monomer, e.g. styrene, that is polymerized in a suspension process or form an interpenetrating network of polyolefin with polymerized vinyl aromatic monomer particles and having a gel content of 0 to 1.5% by weight based on the weight of the particles for improved processability in end-use applications and improved ESCR properties. The interpolymer resin particles have a VICAT softening temperature from about 90°C to about 115°C, and a melt index from 0.2 to 35.0g/10 minutes (Condition). The particles can be mixed with a blowing agent to form extruded foam articles, such as foam board, and can be used in extrusion, injection molding, rotomolding, and thermoforming processes to form a layer, e.g. sheet, film, and as a tie layer in multi-layer structures to bind adjacent layers consisting of incompatible polymers, i.e. polystyrene and polyethylene for improved rigidity in multi-layer structures.



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