

**METHOD FOR PREPARING
POLYCARBONATE BY SOLID
STATE POLYMERIZATION**

Abstract

Solid state polycarbonate formation comprises an initial step of converting a precursor polycarbonate to an enhanced crystallinity precursor polycarbonate and a second step of
5 polymerizing said enhanced crystallinity precursor polycarbonate in the solid state. Several options are employed. These include modifying the precursor polycarbonate by contact with a dihydroxy compound or diaryl carbonate, conversion of the precursor polycarbonate to the enhanced crystallinity polymer by contact with at
10 least one compound selected from the group consisting of alkali metal hydroxides, tetraalkylammonium hydroxides, tetraalkylammonium carboxylates, tetraalkylphosphonium hydroxides and tetraalkylphosphonium carboxylates, and conducting the solid state polymerization in the presence of a catalytic amount of at least one
15 tetraalkylammonium or tetraalkylphosphonium carboxylate. The preferred tetraalkylammonium compounds are tetramethylammonium maleate and tetramethylammonium hydroxide. Polymerization may be conducted in the presence of a solvent resistance-imparting monomer such as hydroquinone or resorcinol or a branching agent
20 such as 1,1,1-tris(4-hydroxyphenyl)ethane.