

ABSTRACT

A process for preparing a PPE microspore dispersion includes steps of: dissolving a polyphenylene ether (PPE) having a number-average molecular weight (M_n) greater than 12,000 g/mole in a first solvent at 45-110°C to form a dissolution liquid; adding processing aids and well mixing the dissolution liquid into the dispersed phase; cooling the dissolution liquid to 42-80°C, and adding a second solvent, to generate PPE microspores in which the PPE wraps around the processing aids; cooling the dissolution liquid to 0-40°C so as to form the PPE microspore dispersion. The PPE microspore dispersion is suitable for impregnation processes performed below 40°C, thereby eliminating the need of using high-temperature impregnation equipment, and providing benefits related to safety and economics. Copper clad laminates made using the PPE microspore dispersion enjoy excellent physical properties such as high Tg point, low Dk, low Df and high copper foil's peel strength.

Figure 1 for publication.