

Application reference: PM-01

Application number: 10201908646Q

Claims:

1. A process for the production of the poly (arylene ether ketone)s polymer materials (PEK, PEEK) comprising the steps of mixing of organic monomers and bases with or without of phase transfer catalysts in a solvent system at elevated temperature for a time duration.
2. A process as claimed in claim 1, wherein the compatible solvent is diphenyl sulfone (DPS), dibenzyl toluene or their mixture.
3. A process as claimed in claim 1 wherein the compatible reaction temperature for reaction may be from 150 °C to 340 °C.
4. A process as claimed in claim 1 wherein the compatible the reaction time duration may be from 5 to 25 hours.
5. A process as claimed in claim 1 wherein the method may further comprise the steps of collection of products by filtration at elevated temperature and washing.
6. A process as claimed in claim 5 wherein the compatible processing temperature for filtration/collection may be from 50 °C to 170 °C.
7. A process as claimed in claim 5 wherein the compatible washing solvent may be toluene.
8. A process as claimed in claim 1 wherein the compatible phase transfer catalyst may be phosphoniums, ammoniums or crown ethers.
9. A process as claimed in claim 8 wherein the compatible phase transfer catalyst molar ratio may be from 0 to 10%.