Vapor-liquid equilibria for binary systems of methyl phenyl carbonate, phenol, anisole and diphenyl carbonate at various pressures

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Polycarbonate (PC) is a durable material. Although it has high impact-resistance, it has low scratch-resistance and so a hard coating is applied to polycarbonate eyewear lenses and polycarbonate exterior automotive components. diphenylcarbonate (DPC), Dimethyl carbonate (DMC) is used as an intermediate material to PC synthesis process in the non-phosgene process. DMC is usually synthesized from CO, methanol, and O2. High-purity DMC, CO2, and water are the reaction products. In this process, when DMC reacts with phenol and bisphenol A by trans-esterification, Methylphenylcarbonate (MPC), DPC methanol to be produced.

In this work, isobaric vapor-liquid equilibrium data at various pressures are reported for the MPC containg binary systems. The experimental ternary VLE data were correlated using the NRTL equation.

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