

Ene reaction of 4-phenyl-3H-1,2,4-triazole-3,5(4H)-dione with dicyclopentadiene

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Abstract

© 2015 Pleiades Publishing, Ltd. The kinetics of the ene reaction of endo-dicyclopentadiene with 4-phenyl-3H-1,2,4-triazole-3,5(4H)-dione in benzene, toluene, acetonitrile, 1,2-dichloroethane, and chloroform have been studied. The reaction volumes and enthalpies have been determined, and the activation volume in toluene has been calculated from the pressure kinetic data. The "anomalous" ratio $\Delta V_{\text{corr}}^{\ddagger}/\Delta V_r = 1.34$ corresponds to a concerted cyclic transition state, though the addition product has acyclic structure.

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