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Chlorosulfonyl Isocyanate in Reaction with Allenylphosphonic Diamides

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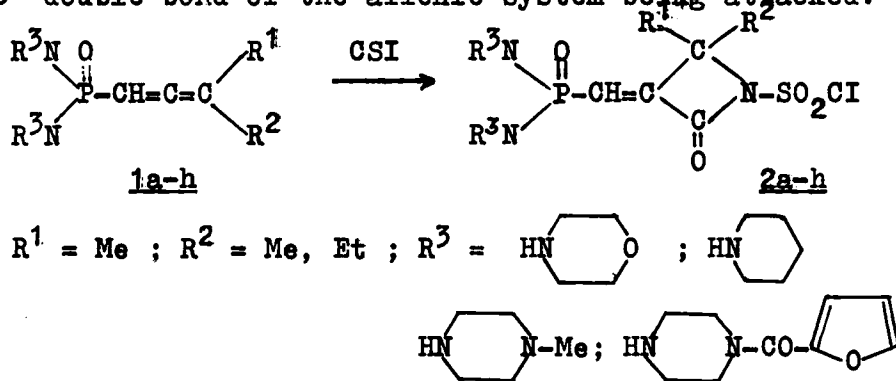
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CHLOROSULFONYL ISOCYANATE IN REACTION WITH ALLENYLPHOSPHONIC DIAMIDES

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The reactions of chlorosulfonyl isocyanate (CSI) with a great number of unsaturated compounds have been thoroughly studied, but there exists no data concerning its reactivity towards unsaturated phosphorus compounds. In the present report we communicate the results of the reaction of CSI with 3,3-dialkylsubstituted allenylphosphonic diamides. The reaction of the diamides 1a-h with CSI runs at low temperature with a high chemoselectivity, only the C²-C³ double bond of the allenic system being attacked:



Depending on the type of the R³N-group and on the size of R¹, R² only the azetidinone-2 derivatives 2a-h are formed or some side reactions also proceed.

All structures were confirmed by IR, MS and ¹H NMR