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Long-chain alkyl esters of O,O-dialkyl dithiophosphoric and thionophosphoric acids prepared on the basis of red phosphorus, elemental sulfur, alcohols, and industrial fractions of higher monoolefins

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Abstract

Copyright © Taylor & Francis Group, LLC. Mixtures of long chain S-alkyl O,O-dialkyl dithiophosphates, and O-alkyl O,O-dialkyl thionophosphates were obtained by the reaction of red phosphorus with elemental sulfur, alcohols, and industrial fractions of C16-C18 and C20-C26 of higher olefins in the presence of Lewis acid catalysts. The products obtained possess high anticorrosion activities toward mild steel.

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Keywords

alcohols, anticorrosion activity, higher olefins, Red phosphorus, sulfur