

(57) Abrégé(suite)/Abstract(continued):

group, R^3 is an organic group having 2-24 carbon atoms, and R^4 is an organic group or a hydrogen. A method of making a gelling agent for a hydrocarbon fracturing fluid is also disclosed. Phosphoric oxyhalide is reacted with a chemical reagent to produce substantially only diester phosphoric oxyhalide, the chemical reagent comprising at least one of an organic alcohol having 2-24 carbon atoms, an organic amine with an organic group having 2-24 carbon atoms, and an organic sulfide having 2-24 carbon atoms. The diester phosphoric oxyhalide is then hydrolyzed to produce diester phosphoric acid.

