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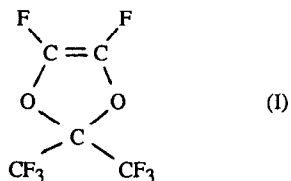
THE PREPARATION AND PROPERTIES OF A NEW FAMILY OF AMORPHOUS FLUOROPOLYMERS: TEFLON®AF

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Teflon® AF is a new family of amorphous fluoropolymers based on bis-2,2-trifluoromethyl-4,5-difluoro-1,3-dioxole, (I), which has unusual properties. In addition to the superior electrical, chemical resistance and thermal properties associated with fluoropolymers the Teflon® AF family possesses glass transition temperatures as high as 300° resulting in improved physical characteristics. The polymers have extremely high optical clarity and have limited solubility in some commercially available perfluorinated ethers. Teflon® AF polymers may be either solution cast into clear micron thin films or melt processed into a variety of forms.

The preparation of (I) is described together with some of its chemical reactions and polymerization with a variety of comonomers.



Teflon® is the Du Pont Company's registered trademark for its fluorocarbon resins.