

Title (en)

Novel reinforced fluoropolymer composite and method for making same.

Title (de)

Verstärktes mehrschichtiges Material aus Fluorpolymer und Verfahren zu dessen Herstellung.

Title (fr)

Matériau composite renforcé en polymère fluoré et méthode pour sa fabrication.

Publication

EP 0125955 A2 19841121 (EN)

Application

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US 48459483 A 19830413

Abstract (en)

A novel composite comprises a substrate having a coating matrix including an initial layer of a perfluoropolymer and an overcoat comprising a fluoroelastomer, a fluoroplastic, a fluoroelastomer/fluoroplastic blend, or a combination thereof. The perfluoropolymer in the initial layer may be a perfluoroplastic, a perfluoroelastomer, or blends thereof. In a separate embodiment, the novel composite includes a substrate coated solely with one or more layers of perfluoroelastomer alone or as a blend with a perfluoroplastic. Where the substrate is not susceptible to hydrogen fluoride corrosion, the composite may include solely one or more layers of a blend of a fluoroelastomer and a hydrogen-containing perfluoroplastic. Cross-linking accelerators may be used to cross-link one or more of the resins contained in the coating layers. Each composite may be topcoated with the layer or layers of a fluoroplastic, fluoroelastomer, and/or a blend thereof. The composite is flexible, exhibits good matrix cohesion and possesses substantial adhesion of the matrix to the material acting as the reinforcement or substrate. A method for making such a composite comprises the unique deployment of a perfluoropolymer directly onto the substrate in a relatively small amount sufficient to protect the substrate from chemical corrosion without impairing flexibility, followed by the application of the overcoat layer.

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