Study of weather effect on pvdf/pmma based blend coatings ageing: influence of artificial ageing (xenotest) and neutral saline fog

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Fluorined and polyacrylic polymers are widely used in restorating historical monuments. PVDF provides easier implementing, high photo and chemical resistance.

In spite of its higher physical properties and lower cost compared to PVDF, use of PMMA as surface protecting agent of building stones is limited because of its low photo-resistance.

However, PVDF/PMMA blends are very interesting materials developped recently in architectural restoration works field, involving the cheaper and the most effective method to produce high performance new polymer materials.

After mixing the two polymers at different contents in the appropriate solvant (DMF), the films undergo exposure to artificial ageing and saline fog.

The results obtained allowed to observe by mean of several tests the behaviour of both polymers systems at different contents.

The set of results revealed that adding PVDF to PMMA improved the properties of the latter namely the resistance during exposure to natural and artificial ageing and saline fog.

PVDF/PMMA blend systems at 70/30 respectively were in accordance with literature reports as the most available formulation to be used.

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