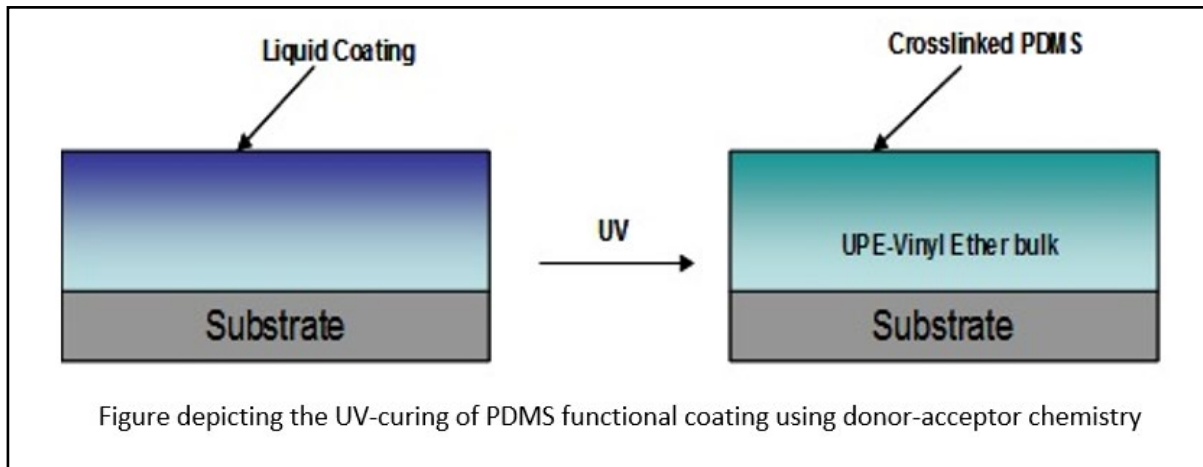


## UV-CURABLE LOW SURFACE ENERGY COATINGS FOR FOULING RELEASE AND ANTI-GRAFFITI APPLICATIONS (RFT-254)

### Invention Summary:

In the current market, there are several applications for low surface energy and UV curable coatings. Scientists at NDSU have developed a novel polyester composition that combines the two properties. The composition contains a modified siloxane backbone blended with co-reactants, diluents and photo-initiators. The mixing process is solvent-free and the composition can be crosslinked within a few minutes. The mixture can be cured using either visible or ultraviolet (UV) light. The modified backbone can be blended with different co-reactants, the most successful combination in the lab testing was - a monohydroxy, a telechelic, and a dihydroxy terminated PDMS UV-cured with triethyleneglycol divinylether. These coatings are beneficial in a variety of applications such as marine ship hulls, anti-graffiti surfaces, release coatings, and protective wood coatings with easily cleanable surfaces.



### Benefits:

- Coatings are solvent, water, and acrylate free
- Low surface energy
- Low manufacturing costs
- Resistant to Oxygen inhibition
- Eliminates health hazards associated with acrylates
- Low levels of siloxane
- Customizable with different diluents

#### **NDSU Research Foundation**

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**Phase of Development:**

This technology has successfully completed laboratory testing with reproducible results.

**Patents:**

This technology is the subject of US Issued Patent No. [8,703,838](#) and is available for licensing/partnering opportunities.

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