

Abstract Submitted
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Wear Characteristics of Oleophobic Coatings in Aerospace Applications HAMZA SHAMS, DHA Suffa University, KANZA BASIT, National University of Sciences and Technology (NUST) — This paper investigates the wear characteristics of oleophobic coatings when applied over Inconel 718, which has widespread applications in the aerospace industry. Coatings once applied were selectively exposed to controlled uni- and then multi-directional sand storm conditions. Size and speed of sand particles colliding with the work surface were carefully moderated to simulate sand storm conditions. Study of friction was performed using Lateral Force Microscopy (LFM) coupled with standard optical microscopy. The analysis has been used to devise a coefficient of friction value and in turn suggest wear behavior of the coated surface including the time associated with exposure of the base substrate. The analysis after validation aims to suggest methods for safe usage of these coatings for aerospace applications.

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