

# Reduces Surface Erosion by Over 98%

**Overview:** Reducing surface erosion is vital to maintaining the as-constructed runway by preserving the critical fines in the runway surface. Aggregate is costly, especially in remote areas, so extending the life of the runway is of high priority. By reducing the amount of surface erosion, costly aggregate overlays can be pushed back by years, therefore, lowering the life cycle cost of the runway considerably.

The U.S. Army Corps of Engineers performed laboratory testing on 12 different dust abatement products to determine the most effective products and application rates to reduce surface erosion under simulated flight conditions. Testing was performed in an air impingement chamber where treated test specimens were exposed to 150mph air blasts at which time sand was injected into the air stream to increase surface abrasions and simulate flight conditions. The samples were weighed prior to testing and after testing. The amount of soil removed from the surface while in the air impingement chamber was considered an indication of how well the product would perform. The less mass lost during testing means the better erosion resistance the product has.

## Test Results:

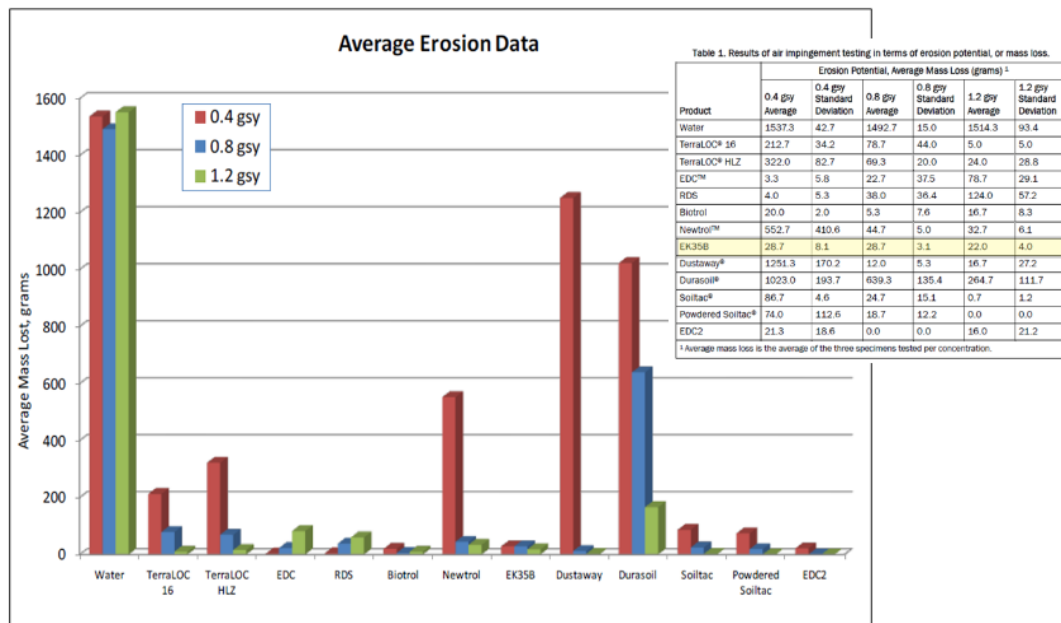


Figure 7. Air Impingement results in terms of mass lost during testing.

**Conclusion:** Under simulated flight conditions, EK35 test specimens achieved an average **reduction in surface erosion of over 98%** compared to the test specimens treated with water only at each application rate tested.