

SOIL-SEMENT® IS BEST ACRYLIC CO-POLYMER FOR EXPEDITIONARY ENVIRONMENTS

The U.S. Army Engineer Research and Development Center (ERDC) was tasked by the U.S. Marine Corps Systems Command (MCSC) to develop two dust control systems, one for expeditionary use on Forward Area Refueling Points (FARPs) and one for sustainment use on roads and other large area applications.

The primary objectives were to perform extensive testing of Acrylic Co-Polymers, develop recommendations for dust pallatives and distribution equipment alternatives for applying products in an expeditionary environment. The dust abatement materials and application methods had to effectively control dust for at least 30 days. *(Evaluation of Expedient Methods for Mitigating Dust on Helipads - US Army Corps of Engineers Research and Development Center)*

As a result of ERDC testing, polymers are recommended for use as a dust palliative where a firm surface is desired on helipads under rotary-wing traffic. Following are the actual results appearing in the report specifically for Acrylic Co-Polymers:

Helipad	Palliative	Pilot Ranking	Test Order
16	Soil-Sement	2	5
5	Soiltac A	4	7
4	Envirotac A	6	3
7	Envirotac B	7	4
6	Soiltac B	9	11

Helipad	Palliative	Pilot Ranking	Test Order
4	Envirotac A	3	3
5	Soiltac A	5	7
4	Envirotac B	6	4
7	Soil-Sement	9	5
6	Soiltac B	11	10



CH-46 Helicopter



CH-53 Helicopter

Helipad	Palliative	Rotor Wash Resistance (Rating x 5)	Palliative Durability (Rating x 2)	*FOD Potential (Rating x 2)	Surface Condition (Rating x 1)	Weighted Rating (Up to 100)
4	Envirotac A	40	20	15	10	85
5	Soiltac A	40	20	15	10	85
4	Envirotac B	40	20	15	10	85
7	Soil-Sement	40	20	10	7	77
6	Soiltac B	30	15	10	7	62

*FOD(Foreign Object Debris)

In order to get a true ranking of the Acrylic Co-Polymers based on other test variables, a statistical analysis was conducted of the following:

- Percentage Solids in the Co-Polymer
- Total Gallons of Co-Polymer Concentrate Used
- Total Gallons of Co-Polymer Solution Used
- Depth to Moisture
- Torvane Strength
- Geonor Strength

Correlating the dependent variables shows that Soil-Sement® has the highest equalized ranking in the Acrylic Co-Polymer category. The following graph illustrates the equalized rankings.

