



# KEY NOTES

Geopro® Learning Tool

January 30, 2004

## Temporary Soil Stabilization [1]

Let's define the subject. First, 'soil stabilization' is any treatment of disturbed soil that significantly reduces or prevents erosion. Secondly, 'temporary' is any time period, short or long, when construction equipment ceases activity over a disturbed soil area. Finally, temporary soil stabilization is a practical management practice when the cost of erosion resulting from a lack of protection is greater than the cost of stabilization.

All *Silt Stop* 700 Series polymers are granulated and 'dry', enabling them to be blown quickly onto a soil surface with conventional equipment. Using a standard application rate of 10 lbs of *Silt Stop* 705, 740, etc. per acre, a single worker is able to 'stabilize' an acre in 15 to 20 minutes. **In essence, an acre of disturbed soil [rough or final graded] can be 'immediately' protected from minor to moderate erosion stresses for approximately one hundred dollars.**

### How *Silt Stop* Works

The first raindrops begin polymer solubilization, initializing the process of drawing adjacent soil particles together and making them significantly more difficult to dislodge. Continued raindrops promote a rapid spreading of this process over a broader area. With reasonable grading techniques and polymer application, the soil surface becomes 'fully' covered in short order.

*Silt Stop* does not seal the soil surface. Conversely, by drawing soil particles together, it increases the near surface soil porosity and infiltration rate. Therefore, more water will penetrate the soil surface, resulting in less storm water runoff. When applied with seed or a combination of seed and fertilizer, *Silt Stop*'s enhanced infiltration benefit will result in improved seed germination and early plant vitality.

### Longevity

*Silt Stop* polymers typically provide significant soil binding performance for 60-90 days. As with all topically applied 'sprays', operation of equipment or excessive foot traffic over a stabilized area will degrade *Silt Stop*'s effectiveness, possibly requiring a re-application to bring the system to full capability.



Erosion 'costs' come in many direct and indirect forms ... all very real:

- Regrading
- On-site damage repair
- Off-site mitigation
- Lost opportunity
- Fines
- Work stoppages
- Damaged public image

Blowing Applied Polymer Systems, Inc. [APS] *Silt Stop*® 700 Series PAM's onto disturbed soil represents, arguably, the most practical management practice for temporary soil stabilization.

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**Effectiveness**

By itself, *Silt Stop* is an effective temporary erosion control management practice for mild to moderate events when placed on mild to moderate slopes [steepness and length]. Its capabilities [strength and longevity] are enhanced with mulches such as straw or compost and greatly enhanced when used beneath erosion control blankets or turf reinforcement mats. However, when used alone, *Silt Stop* is not a 'cure-all' for all rain intensities or slope severities. Common sense continues to be important!

**Equipment**

Several blowers are suitable to apply *Silt Stop*. As shown in the accompanying photographs, simple adjustments to standard blowers have proven to be effective. The Stihl® 420 comes standard with a mounted reservoir capable of holding approximately 15 lbs of *Silt Stop* [approximately 1 to 1.5 acres in application]. A dry-product feed accessory provides an easy method to adjust application rate and at the same time, maintain a constant flow of polymer onto the soil surface.

**Benefits**

- ❖ *Effective Performance*
- ❖ *Minimal Cost*
- ❖ *Fast Application* – disturbed soils can be treated in a manner of minutes at the conclusion of a day's operations or when rain is imminent.
- ❖ *Minimal Equipment Requirements* – While blower methodology is highlighted in this **KeyNote**, drop or broadcast spreaders as well as hand broadcasting will effectively deliver *Silt Stop* to soil surfaces.
- ❖ *Rapidly Learned Technique*



Stihl 420

*Silt Stop* 700 Series PAM's clearly assist project owners, developers and contractors avoid unnecessary erosion costs. Due to low material and installation costs, blown *Silt Stop* is a practical management practice for many disturbed soil areas. Contact your **Price and Company, Inc. Regional Representative** to learn more about this and other erosion and sediment control products and systems.



*Silt Stop* is a trademark of Applied Polymer Systems, Inc.

*Stihl* is a trademark of Andreas STIHL AG & KG, Waiblingen

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