



Product: SlurryShield® FGP™

SlurryShield FGP brings a new level of application simplicity while significantly increasing slurry quality control and excavation quality assurance in the most challenging soils!

Physical Data:

Appearance: Opaque to White free flowing granular solid
Odor: Odorless.
pH: NA
Freeze Point: NA
Specific Gravity: 1.015-1.025 (Water = 1.0)

Description:

SlurryShield® FGP™ is a multifunctional synthetic stabilization fluid for use in geoconstruction excavation. SlurryShield FGP provides an increased degree of quality control over the slurry operation by simplifying the process for site personnel over historic slurry systems by eliminating the need for slurry additives and pH adjustments in most cases.

Functions:

SlurryShield FGP readily disperses under low shear agitation into water to form a clear, viscous excavation fluid. This fluid then acts within the excavation to form a non-colloidal barrier at the excavation-formation interface to control fluid loss from the excavation and to exert positive differential pressure against the exposed formation walls.

General Application Instructions:

SlurryShield FGP should be mixed initially at a minimum rate of 2.00 to 3.0+ kg/m³ of fresh water. For projects of any scale this should be done in a properly designed mixing tank, see KB's "Mix Tank Diagram" for specifics.

Table with 5 columns: Formation Type, Average Initial SlurryShield FGP Dosage (lbs/cu yd, lbs/1000 gals, kg/m3), and Typical Marsh Funnel Visc. (sec/qt). Rows include Silt & Fine to Medium Sand, Coarse Sand & Pea Gravel, and Coarse Sand & Cobbles.

The dosage rate of the SlurryShield FGP in the initial make-up water should always err on the side of caution. Use of the higher levels recommended in the dosage chart should always be applied when in doubt.



Formation Type	Average Maintenance SlurryShield PBS Dosages "True Project Consumption Dosage"			Typical Marsh Funnel Visc.
	lbs/cu yd	lbs/1000 gals	kg/m3	
Silt & Fine to Medium Sand	1.60-2.95+	7.93-14.60+	0.95-1.75+	>60-115+
Coarse Sand & Pea Gravel	1.69-4.22+	8.35-20.86+	1.00-2.50+	>70-125+
Coarse Sand & Cobbles	1.69-5.06+	8.35-25.04+	1.00-3.0+	>80-125+

Maintenance dosages, for addition to recaptured slurry, listed above are guidelines from typical experience. If unsure of the correct maintenance dosage it is best to err on the high side while contacting KB for more specific direction. Maintenance additions should preferably be done in the mixing tank and not at the point of slurry entrance into the next excavation. At least one sedimentation tank, two preferably, is always recommended for recaptured slurry to pass through prior to the mix tank and the re-addition of SlurryShield FGP. **The maintenance dosage is the true project consumption and the factor from which estimated project costs are accurately calculated. The initial Make-up dosage is typically a one time occurrence on a project and not relative to the overall project cost unless an improper (low concentration) initial slurry concentration is established.**

Actual Initial and Maintenance dosages will vary depending on water quality and on the porosity and chemical reactivity of the soils being excavated. It is critical to pay attention to Slurry Viscosity and Specific Gravity in the excavation regularly. If the S.G. moves more than 0.01 kilos/meter<sup>3</sup> then the slurry is loading with fines and precautions must be implemented to ensure fines are removed in the excavation and sedimentation tank. **The slurry viscosity should never drop below 60 seconds in any type of soil. When there is doubt over the correct viscosity always err on the high side as low viscosities can result in rapid increases in entrained fines and in extreme cases may result in the slurry system flipping to a native mud system.**

Additional SlurryShield FGP may also be introduced at the point of excavation or into the mix tank or agitated slurry storage tanks or through a KB Eductor emptying directly into the excavation. The addition of small quantities of FGP at the hole provides the following benefits: an abundance of gels to control fluid loss, rapid increase in viscosity to stabilize highly permeable soils, enhanced chemical adhesion within low strength soils and immediate intervention in case of emergencies or other atypical situations. When adding SlurryShield FGP at the point of excavation, please pour FGP slowly into a KB Eductor feeding into an adequate flowing stream of slurry emptying into the excavation. SlurryShield FGP may also be added directly to the stream of fluid flowing into a pile while the excavation tool is one meter (3 feet) below the surface of the slurry and rotating to form a vortex within the slurry column. Avoid the agglomeration of FGP into "white gel balls" in the slurry by slowly sifting product into the fluid stream. After completing the addition of FGP to any excavation raise and lower the excavation tool from the top of the hole to the bottom to assist in proper distribution of the product throughout the slurry column. **The slurry viscosity within the excavation should never be allowed to drop below 60 seconds per quart regardless of what type of soil is being excavated.**

When excavating more challenging formations, KB International's System additives including Instafreeze should be utilized in combination with a SlurryPro or SlurryShield system to increase slurry stabilization performance. The more challenging the formation type the more requirements for various SlurryPro Specialty Additives.

**When extraordinary geotechnical or water conditions arise during actual excavation, the SlurryShield FGP fluid is completely compatible with KB International's full SlurryPro line of additives. In the rare case that the need for one or more of these additives does come about it is always advisable to immediately contact KB for additional technical guidance.**



## **Introducing KB's Next Generation in Technology, SlurryShield®**

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**Raising the Standards to New Levels of Simplicity and Quality Assurance!**

### **The SlurryShield Primary Products:**

**SlurryShield® PBS™**  
**SlurryShield® FGP™**

### **Advanced KB Synthetic Additives Available for those Unusual Conditions:**

**SeaDrill®**  
**KnockOut®**  
**KobbleBlok®**  
**ImPac™**  
**SlurryPro MPA™**  
**SlurryPro LA-1™**  
**SandSeal® MMS™**  
**InstaFreeze™**  
**InstaFreeze C-2**  
**WeightIt™**  
**ProTek® 100**

**Please Contact KB International or one of our Agents For Assistance when Planning to Utilize our Products!**



## **Technology to Build On™**

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### **For More Information:**

Additional information on all aspects of the SlurryPro SlurryShield System is available from KB International on request. Standard Operating Procedures provide detailed recommendations for the use of the system in bored piles, diaphragm walls, and other applications.

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