



SlurrySMART

Physical Data:

Appearance:	Opaque to white free flowing granular solid
Odor:	Odorless
pH:	NA
Freeze Point:	NA
Specific Gravity:	1.00-1.01 (Water = 1.00)

Description:

SlurrySMART forms a synthetic membrane on the sidewalls during excavation that controls loss of fluid to the formation. It also allows for positive pressure to be applied to the formation wall insuring excavation stability. Unlike bentonite, this membrane does not continue to grow on itself over time. SlurrySMART is able to react to field conditions and perform as needed based on system demands. **No pH adjustment** with caustic or soda ash is required when using SlurrySMART unless, extreme water hardness or salt water is encountered.

General Application and Instructions:

KB recommends SlurrySMART initially be mixed at a rate of 1.5 to 2.5 lb/yd³ of fresh water. For larger projects this should be done in a properly designed mixing tank; please see KB's "Mix Tank Diagram" for specifics. Many contractors find they can start with lower dosages and adjust as required for stability. On smaller projects or highly mobile projects, such as transmission lines, SlurrySMART may be applied at the point of excavation. Typical product consumption rates are suggested to be as follows; although many contractors find less is acceptable:

Formation Type	Suggested SlurrySMART Initial Dosage			Typical Marsh Funnel Visc.
	lbs/yd ³	lbs/1000 gals	kg/m ³	sec/qt
Clay & Shale	1.50-2.20	7.50-11.00	0.70-1.00	60-75±
Silt & Fine to Medium Sand	1.75-2.20	8.75-11.00	0.80-1.00	65-100±
Coarse Sand to Pea Gravel	2.00-2.50	10.00-12.50	0.90-1.15	75-100±
Gravel to Cobbles	2.20-3.00	11.00-15.00	1.0-1.40	85-100+

Formation Type	Suggested SlurrySMART Refreshment Dosage			Typical Marsh Funnel Visc.
	lbs/yd ³	lbs/1000 gals	kg/m ³	sec/qt
Clay & Shale	1.00-1.50	5.00-7.50	0.45-0.70	60-75±
Silt & Fine to Medium Sand	1.10-1.70	5.50-8.50	0.50-0.80	65-100±
Coarse Sand to Pea Gravel	1.25-2.00	6.250-10.00	0.60-1.00	75-100±
Gravel to Cobbles	1.266-2.109	6.259-10.432	0.75-1.25	85-100+

Additional SlurrySMART may be introduced at the point of excavation through a KB Eductor or into the mix tank or agitated slurry storage tanks. The addition of small quantities of SlurrySMART at the hole provides the following benefits: rapid increase in viscosity to stabilize highly permeable soils and immediate intervention in case of emergencies or other atypical situations. When adding at the point of excavation, please pour SlurrySMART slowly into a KB Eductor that feeds into an adequately flowing stream of slurry emptying into the excavation. SlurrySMART may also be added directly into the stream of fluid flowing into a pile while the excavation tool is one meter (3 feet) below the surface of the slurry. The tool rotates to form a vortex within the slurry column. Avoid clumping the dry SlurrySMART into "white gel balls" by slowly sifting product into the fluid stream. Feeding SlurrySMART too quickly, with lack of

proper agitation, causes balling of the polymer particles into “fish eyes” and larger polymer masses. After adding SlurrySMART to the 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 55 seconds per quart regardless of what type of soil is being excavated.

At least one sedimentation tank is always recommended for recaptured slurry to pass through prior to the mix tank and the re-addition of SlurrySMART.

The dosage rate of the SlurrySMART synthetic polymer in the initial make-up water should use the higher levels recommended in the dosage chart. Only after the slurry has been established, in a secure dosage and viscosity obtained, should the dosage be reduced.

If unusual site conditions arise during excavation recommendations should be sought from KB technical personnel to resolve the problem.

Special Operational Precautions and Instructions:

It is suggested that the specific gravity of a SlurrySMART fluid should not exceed 1.05 under normal operating conditions. If low hydrostatic conditions are encountered where the water table is less than 3 meters or 10 feet beneath the slurry level, the specific gravity of the slurry should be increased as required.

Due to the unique characteristics of SlurrySMART as compared to bentonite, several key operational procedures are recommended to be modified from bentonite systems. These modifications will have a major impact on the overall effectiveness and successful use of SlurrySMART. For smaller projects, please consult KB International’s “General Operating, Product Addition, and Testing Procedures.” For larger or more complicated projects, please contact KB International for specific project planning.

Packaging:

25 kilo / 55 lb. poly bags

10 kilo / 22 lb. resealable plastic pails

Availability:

SlurrySMART is available out of KB International’s Charleston, SC warehouse and various other regional warehouses. Please check for availability in your area.

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