



Product: SlurryPro® MPA™

Physical Data:

Appearance: Slightly amber to clear liquid
Odor: Slightly Odor
pH: NA
Freeze Point: 34°F
Specific Gravity: 1.00 - 1.01 (Water = 1.0)

Description & Function:

SlurryPro® MPA™ is a synthetic polymer in liquid form which functions with SlurryPro® CDP™ and LA-1™ or a SlurryShield® fluid to form a more tenacious and less permeable polymeric membrane at and within the formation interface. It also promotes a soft grouting effect within the membrane area in porous soils. MPA additionally functions within KB Systems to assist in dropping light suspended solids from the slurry.

General Application Instructions:

MPA acts as a catalyst within the SlurryPro CDP and SlurryShield fluids, and should be used in a **VERY DILUTE** form at a ratio of approximately 0.5% to 1% or less concentration (four to six tablespoons of MPA as is to 5 gallons (20 liters) of water). This dilute MPA solution should be slowly added in half pint to one pint quantities to the stream of slurry entering the excavation after every few feet of excavation. Dilute MPA solution may also be spot applied by placing 1 to 2.5 gallons of very dilute MPA solution into a zip lock baggy with a weight, such as a rock or small piece of rebar to assist in sinking the bag to the bottom of the excavation. The baggy should be punctured two or three times just below the zip lock to insure any captured air can escape allowing the bag to sink. These punctures also insure in product distribution throughout the slurry column. KB has nicknamed this addition method a “bomb” addition. Once the dilute MPA “bomb” has been dropped to the bottom of the excavation the digging tool should be placed back in the excavation and lowered to the bottom to crush the “bomb”. After crushing the bomb the excavation tool should be slowly rotated or manipulated while raised and lowered approximately 3 meters or ten feet within the slurry column. Then excavation should resume.

When used to assist in chemical grouting of an unstable or sloughing sidewall, the dilute MPA “bomb” should be added immediately after “bombs” of full strength LA-1 are added, broken and distributed within the slurry column. When breaking “bombs” of LA-1 and dilute MPA the excavation tool should be slowly raised and lowered approximately 2 to 3 meters from the bottom of the excavation forcing the treated slurry out against the excavation sidewalls. When this procedure does not completely stabilize the sidewall KB’s InstaFreeze System should be immediately applied.

Application of MPA for bottom cleanout should only be attempted after ImPac has been applied correctly and cutting or fines persist. If applied prior to excavation completion and clean out, the **VERY DILUTE** solution of SlurryPro MPA may be delivered to the bottom of the excavation in bomb form. The excavation tool should then be lowered and slowly manipulated to break the MPA bags. After breaking the bombs the tool should be raised and lowered approximately 3 meters (10 feet) off the bottom of the excavation. This raising and lowering process should be repeated twice. The excavation tool should then be placed on the bottom of the excavation and one last bite taken from the base of the excavation to assist in forming a seal at the base of the bucket or grab's jaws preventing them from leaking spoils as they are withdrawn. The tool should then remain at rest on the bottom of the excavation for a few minutes allowing the MPA solution adequate time to react with the fines within the slurry column above the excavation tool. The clean-out bite should then be slowly withdrawn from the excavation.

If the fluid does not meet the sand content specification, bombs of dilute ImPac described below should always be applied and sand content rechecked prior to considering reapplication of a **VERY DILUTE** solution of SlurryPro MPA as described in the above procedure. Clean-out passes with a properly designed clean-out bucket



or grab should continue until the sand content, taken with a proper bottom hole sampler approximately two to three feet from the bottom of the excavation, reads **less than 1% entrained sand (or as specified) by the standard API Sand Content Test Method** where **wash water is substituted with chlorine bleach**. If the fluid still does not meet the sand content specification, repeat the above procedure adding more dilute MPA solution in bags. **Please note the overuse of MPA or the application of undiluted MPA can result in dramatically decreasing the viscosity of the slurry, thereby increasing the consumption of CDP in the excavation and possibly cause other deleterious effects within the SlurryPro system and excavation.**

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.

Unusual site conditions may arise during actual excavation, in which case the recommendations from KB technical personnel must always be followed.

Special Operational Precautions and Instructions:

The specific gravity range for the slurry should be maintained from 1.01 to 1.04 under normal operating conditions. If low hydrostatic conditions are encountered where the water table is less than 3 meters (10 feet) beneath the slurry level, the specific gravity of the slurry should be increased as required using WeightIt or a combination of WeightIt™ and SandSeal™ to raise the slurry S.G. accordingly.

Due to the unique characteristics of the SlurryPro CDP Earth Stabilization System as compared to bentonite, several key operational procedures should be modified from bentonite systems. These modifications will have a major impact on the overall effectiveness and successful use of KB International's Earth Stabilization Systems. 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:

SlurryPro MPA is available in: 20 liter / 5 gallon resealable plastic pails

KB's SlurryPro® CDP™ System, including additives, and SlurryShield® Technology have been awarded four US Patents, No. 5,407,909, 5,663,123, 6,248,697 and 6,897,186 as well as various corresponding international patents. Additional patents are currently pending.

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For More Information:

Additional information on all aspects of the SlurryPro CDP Vinyl System is available from KB International LLC on request. General Operating Procedures provide more detailed recommendations for the use of KB's System in bored piles, diaphragm walls, and other applications.

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