MAXIMUM DRILLING EFFICIENCY













DRILLING PRODUCTS

Drilling Products

is a division of CETCO, which is a wholly owned subsidiary of Minerals Technologies Inc. Offering a wide assortment of high quality bentonite drilling fluids, grouts, sealants, polymers, and additives, CETCO can help maximize your drilling efficiency and meet your needs in the field. Our complete line of professional products are specially designed to enhance the cost-effectiveness of drilling operations by controlling and improving drilling fluid properties. Each and every drilling product is supported by our experienced team of field engineers and research scientists.

CETCO is committed to bringing you innovative, costeffective products that go beyond merely meeting your needs for all drilling related markets. We are dedicated to providing our customers the newest solutions in drilling product technology.





With the industry's best on-site engineering and advanced technical support, CETCO is committed to ensuring success in any drilling project.







MARKETS SERVED

Non-Oil & Gas Drilling **Environmental Drilling** Foundation Drilling Geotechnical Drilling Geothermal Heat Loop Drilling Geothermal Heat Loop Grouting Horizontal Directional Drilling Mining & Exploration Monitoring Well Drilling Slurry Engineering Slurry Solidification Slurry Walls **Tunnel Boring** Waterwell Abandonment Waterwell Drilling Waterwell Grouting Waterwell Rehabilitation

"CETCO has been a major contributor to the growth of Tarheel Contractors Supply since I purchased the company in 2001. Thanks to CETCO's quality products, plus excellent field and technical support, we have been able to generate a 25% annual compounded growth rate on CETCO products. Quality products and quality people providing quality service have proven to be a winning formula."

- Harold Peeples, President Tarheel Contractor Supply, Inc. Rock Hill, SC

DRILLING FLUIDS

CETCO has consistently provided the drilling industry with the highest quality drilling fluids that keep operators running at peak efficiency. Our bentonite based drilling fluids are made from the highest quality sodium bentonite from Wyoming.

HYDRAUL-EZ® is a high-yield, 200 mesh sodium bentonite with a special dry polymer additive. It is designed to maintain borehole integrity in horizontally drilled boreholes. NSF/ANSI/CAN Standard 60 Certified.

PREMIUM GEL® is a 200 mesh, 90 bbl yield sodium bentonite for freshwater drilling, slurry walls, and tunnel boring. PREMIUM GEL complies with API 13A Section 9, Specifications for Drilling Fluid Materials. NSF/ANSI/CAN Standard 60 Certified.

PUREGOLD® CLEANDRILL is a bentonite free powder designed for special conditions associated with drilling horizontal directional recovery wells for groundwater remediation. It maintains formation permeability and porosity. PUREGOLD CLEANDRILL is designed for use in drilling operations where bentonite based drilling fluids are restricted and a biodegradable drilling fluid is recommended.

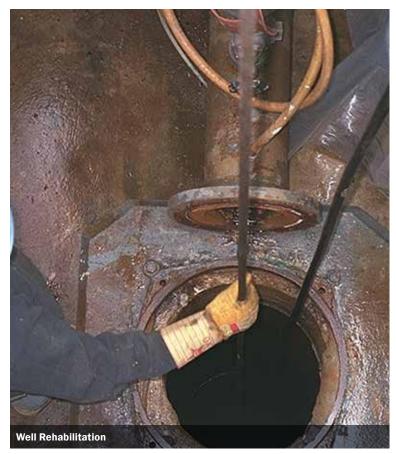
PUREGOLD® GEL is a minimum 90 bbl yield, organic-free, untreated, high quality bentonite drilling fluid for freshwater drilling, slurry walls, and tunnel boring. It complies with API 13A Section 10, Specifications for Drilling Fluid Materials. NSF/ANSI/CAN Standard 60 Certified.

SUPER GEL-X® is an easy mixing, high viscosity 200 bbl yield freshwater drilling fluid produced from the highest grade Wyoming sodium bentonite. May be used for all types of freshwater mud rotary drilling. NSF/ANSI/CAN Standard 60 Certified.



WELL REHABILITATION

With an outstanding history, CETCO well rehabilitation products have long been the industry standard for improving well efficiencies that have been diminished by the presence of mineral encrustation, bio-fouling, and other occurrences of chemical and physical plugging.



BMR™ removes bentonite that has been introduced as a drilling fluid. Additionally, BMR removes naturally occurring clays that intrude into the gravel pack. NSF/ANSI/CAN Standard 60 Certified.

DPA™ cleans casing, screens, gravel packs, and water-bearing formations of deposits of mineral scale. DPA is a granular product. NSF/ANSI/CAN Standard 60 Certified.

LBA™ cleans casings, screens, and all other components of the well that are affected by biofouling. NSF/ANSI/CAN Standard 60 Certified.

SC-200™ is a liquid surfactant. This wetting agent enhances the dispersing efficiency of other CETCO well rehabilitation products and enables these products to enter into the pores and cracks of the encrustations, thereby accelerating the rehabilitation process.

SUPER THIN™ is a highly concentrated additive engineered to disperse the filter cake created by a bentonite drilling fluid. It offers immediate thinning action and is more cost-effective than traditional thinners. NSF/ANSI/CAN Standard 60 Certified.



"With over 20 years of providing solutions to our directional drill customers, it is a great fit to have CETCO on board to compliment our product. CETCO products, like ours can be depended upon day after day. What attracted me to CETCO was a "Great product with Great service". I wanted to align my company with a drill product supplier that had the same commitment to excellence as we do. Their staff/field representatives are leaders in their industry and provide solutions. CETCO products and service for me please."

- Bo Adams, President Vermeer Sales Southwest Gilbert, AZ

POLYMERS & ADDITIVES

Able to handle any complex drilling conditions, the diverse line of polymers and additives at CETCO continue to assist contractors in the most difficult soil conditions. CETCO polymers and additives consistently deliver the highest performance therefore adding significant value. Having an extensive line of high quality and reliable additives, CETCO will assist you in improving the performance of all of your drilling operations.

ACCU-VIS® (PHPA, 50% Active) is a liquid copolymer designed for fast field mixing, viscosity building, and clay/shale stabilization in aqueous drilling fluids. NSF/ ANSI/CAN Standard 60 Certified.

BARITE is a high-grade barium sulfate specially processed used as a drilling fluid weighting additive.

CETCO® DEFOAMER is a non-ionic silicone solution designed to reduce surface tension and break foam bubbles over a wide variety of conditions.

CETCO® JOINT COMPOUND is a lead-free, premium grade tool joint and drill collar lubricant for heavy duty drilling.

CETCO® TC BOOSTER is an additive used to boost the thermal conductivity of CETCO GEOTHERMAL GROUT. The shape of the CETCO TC BOOSTER is a large flake which maximizes the thermal conductivity potential while reducing the amount of dust produced when utilizing the product in the field. NSF/ANSI/CAN Standard 60 Certified.

CETCO® X-TORQUE is a 100% environmentally safe, non-petroleum lubricant specifically developed for horizontal directional drilling and mineral exploration, as well as other drilling applications.

CLAY CUTTER™ is a concentrated, non-hazardous, proprietary clay inhibitor that can be used with either polymer or bentonite drilling fluid systems. CLAY CUTTER is an ideal additive for HDD bores in reactive clay soils.

CLAY CUTTER™ PRO is a concentrated, non-hazardous, proprietary clay inhibitor that can be used with either polymer or bentonite drilling fluid systems. CLAY CUTTER PRO is an ideal additive for HDD bores in reactive clay soils.

DE-CHLOR™ is a white granular crystal that neutralizes chlorine in municipal water. Chlorine in water supplies can destroy polymer drilling fluids.

DRILL-TERGE™ is a liquid solution of non-ionic surfactants formulated to increase detergency and wetting properties of drilling fluids.

HERCUL-EZ™ is a proprietary additive that is used in conjunction with bentonite based drilling muds. With proper formulation, the system will produce a unique drilling fluid with excellent shear thinning characteristics. At low shear or at rest, the fluid will gel and allow for suspension of large cuttings, yet thins immediately under pumping conditions. NSF/ANSI/CAN Standard 60 Certified.

HYDRO-PAC™ is a dry hybrid-polymer drilling fluid. HYDRO-PAC is an innovative breakthrough in drilling fluids and containment fluids due to its ability to use saltwater as the hydrating mix water.

INSTA-CLEAR™ DRY is designed to lower pH, break emulsions, and remove high levels of suspended solids in water filled boreholes. It works fast for water sampling and down-hole filming.

INSTA-FLOC™ is a high molecular weight, non-ionic polyacrylamide and is extremely effective in removing fine-grained solids suspended in the slurry.

INSTA-VIS™ DRY (PHPA) is an easy mixing, water soluble, high molecular weight an-ionic polymer. This granular polymer improves drilling efficiency in both horizontal and vertically drilled boreholes.

INSTA-VIS™ LOW VISCOSITY is an easy-mixing, watersoluble, polymer used in horizontal and vertical drilling applications. Ideal for use in recycling systems. NSF/ ANSI/CAN Standard 60 Certified. INSTA-VIS™ PLUS (PHPA, 38% Active) is a multifunctional liquid polymer designed to improve drilling efficiency in both horizontal and vertically drilled boreholes through its rapid field mixing, viscosity development, and clay and shale inhibition. NSF/ANSI/ CAN Standard 60 Certified.

LEB-CD™ is a highly concentrated liquid enzyme breaker used to break down PUREGOLD CLEANDRILL slurry.

MACRO-FILL is a granular, advanced super-absorbent loss circulation material that rapidly absorbs and retains large volumes of water from aqueous solutions.

MAGMA FIBER FINE is a specially formulated, extrusion spun mineral fiber loss circulation material. This coarse, long, and flexible fiber will give increased circulation by bridging and plugging off voids, fractures, and all types of permeable formations.

MULTI-SEAL is a select blend of four types of materials normally used for loss circulation. MULTI-SEAL contains no fermenting materials or materials that chemically change the rheological properties of the fluid, even polymer drilling fluids.

PUREGOLD® LUBE is an environmentally safe premium grade lubricant, free of petroleum hydrocarbons and metals. PUREGOLD LUBE is a tool joint lubricant designed for use in environmental drilling.

QUAD POWER™ POWER-BASE™ is a highly concentrated, liquid, polymer emulsion that serves as the base for QUAD POWER polymer drilling products. NSF/ANSI/CAN Standard 60 Certified.

QUAD POWER™ POWER-CLAY™ is a concentrated, non-hazardous, proprietary clay inhibitor that can either be used with bentonite fluids or can be added to other QUAD POWER polymer drilling products.



drilling fluids.

SLURRYBOND™ 2000 G is a granular inorganic mineral and polymer formula used for the solidification of high solids drilling slurries. SLURRYBOND 2000 G is made from a non-biodegradable mineral and polymer mixture designed for use on waste slurry that fails to pass a Paint Filter Liquids Test (PFLT) or a slump test.

SODA ASH is used to raise the pH of make-up water for bentonite and polymer drilling fluids by precipitating soluble calcium. Using SODA ASH will increase the performance of bentonite and polymer drilling fluids.

SUPER PAC™ (PAC, Liquid) is an easy mixing, liquid polymer that enhances the properties of a bentonite drilling fluid. When added to HYDRAUL-EZ or SUPER GEL-X, SUPER PAC creates an ideal fluid for drilling in a variety of conditions.

SUPER PAC™ XTRA-LOW (PAC, Liquid) is a low viscosity, liquid multi-purpose polymer. SUPER PAC XTRA-LOW enhances the beneficial properties of bentonite and polymer drilling fluids.

SUPER THIN™ is a highly concentrated additive engineered to reduce drilling fluid viscosity. It offers immediate thinning action, reduces gel strength, and is more cost-effective than traditional thinners. NSF/ANSI/CAN Standard 60 Certified.

SUSPEND-IT™ (Xanthan Gum) is an easy mixing biopolymer additive used to control drilling fluid rheology. It is designed to enhance gel strength of drilling fluids for improved suspension and transport of drill cuttings, gravel, and cobble on long bores.

SUSPEND-IT will perform effectively in fresh or saltwater.

VARIFLO® QD (Granular Guar Gum) is a coarse granular, high-viscosity blend of guar gum formulated for easy and quick dispersion in drilling applications. Coarser granules prevent lumps or encapsulation.

VERSAFOAM® PLUS is an ultra high-yielding, biodegradable, liquid foaming agent for use in fresh and saltwater air rotary drilling. Dry air rotary drilling or mixed with water for foam drilling. NSF/ANSI/CAN Standard 60 Certified.

GROUTS & SEALANTS

CETCO offers a wide assortment of high quality bentonite products to meet the ever changing needs of our customers. CETCO® and PUREGOLD® grouts and sealants provide for the grouting of newly constructed wells and of the decommissioning of abandoned wells and boreholes. In addition to traditional grouts and sealants, CETCO offers specialty grouts for Ground Source Heat Pump (GSHP) Systems and Utility & Telecommunications grounding.



ACCU-VIS®/BELLE CRUMBLES™ blends a granular bentonite with a quick activating liquid polymer to form a slurry that provides an economical way to seal and grout boreholes, well casings, and earthen structures. Once set, the slurry forms a complete grout seal with low permeability. Both are NSF/ANSI/CAN Standard 60 Certified.

C/S GRANULAR™ and CETCO® CRUMBLES are granular bentonite products composed of polymer-free, dried bentonite in various mesh sizes. CETCO CRUMBLES are coarser in size than C/S GRANULAR. Both are NSF/ANSI/CAN Standard 60 Certified.

CETCO® COARSE CHIPS and PUREGOLD® MEDIUM CHIPS are used to decommission wells or seal the annulus of a borehole. CETCO COARSE CHIPS are natural sodium bentonite screened to 3/8" (0.95 cm) to 3/4" (1.90 cm) in size. PUREGOLD MEDIUM CHIPS are natural sodium bentonite screened to 1/4" (0.64 cm) to 3/8" (0.95 cm) in size. Both are NSF/ANSI/CAN Standard 60 Certified.

CETCO® COATED TABLETS are coated using an aqueous carrier to apply the coating. The coating allows the tablets to reach a discrete depth within the waterwell, piezometer, monitoring well, or annular space. These untreated organic tablets are compressed into 1/4" (0.64 cm) and 3/8" (0.95 cm) sizes. Both are NSF/ANSI/CAN Standard 60 Certified.

CETCO® C-GROUT is an engineered bentonitebased blend designed to produce optimal traits in cementitious, high compressive strength grouts. The specialized blend can reduce the complexity of formulating high performance grouts by containing all the admixtures necessary for optimal grouting. **CETCO® GRANULAR GROUT** mixes into a smooth bentonite grout that has no lumps and pumps easily. CETCO GRANULAR GROUT offers reduced friction going down the tremie pipe and has a firm set-up. NSF/ ANSI/CAN Standard 60 Certified.

CETCO® GROUT is a 20% solids, polymer-free, single-component, easy-to-use sodium bentonite grout available in powdered form. CETCO GROUT allows placement in a low viscosity state. NSF/ANSI/CAN Standard 60 Certified.

CETCO® MX 80® is a granular bentonite product composed of dried bentonite clay with a typical size range between 30 and 100 mesh.

CETCO® TABLETS are made from organic free, high-swelling pure sodium bentonite. CETCO TABLETS are compressed into 1/4" (0.63 cm), 3/8" (0.95 cm), and 1/2" (1.27 cm) diameters. NSF/ANSI/CAN Standard 60 Certified.

CETCO® TC BOOSTER is an additive used to boost the thermal conductivity of CETCO GEOTHERMAL GROUT. The shape of the CETCO TC BOOSTER is a large flake which maximizes the thermal conductivity potential while reducing the amount of dust produced when utilizing the product in the field. NSF/ANSI/CAN Standard 60 Certified.

GEOTHERMAL GROUT™ is a specially blended high solids bentonite that can be mixed with sand in a two-part thermally conductive grouting material to improve the performance of ground source heat loop applications. GEOTHERMAL GROUT is an easy pumping grout that has been carefully developed to efficiently suspend silica sand for enhanced thermal

conductivity. GEOTHERMAL GROUT can be mixed to meet a range of thermal conductivity (TC) from 0.40 to 1.00 Btu/hr/ft/F (0.68 to 1.69 W/mK). NSF/ANSI/CAN Standard 60 Certified.

GROUNDING GROUT™ is a highsolids, single-component, bentonite grout formulated to provide a conductive seal around grounding rods. GROUNDING GROUT increases the grounding system's conductivity by lowering the resistivity from 300 ohms/meter with normal soil to 0.76 ohms/meter. GROUNDING GROUT adheres to the entire surface of the grounding rod offering the greatest effective resistance area to stabilize the ground resistance despite seasonal changes in temperature and soil moisture content.

HIGH TC GEOTHERMAL GROUT™

is a specially blended high solids bentonite that can be mixed with sand in a two-part, thermally conductive grouting material to improve the performance of ground source heat loop applications. HIGH TC GEOTHERMAL GROUT is an easy pumping grout that has been carefully developed to efficiently suspend silica sand for enhanced thermal conductivity. HIGH TC GEOTHERMAL GROUT can be mixed to meet a range of thermal conductivity (TC) from 0.40 to 1.21 Btu/hr/ft/F (0.68 to 2.05 W/mK). NSF/ANSI/CAN Standard 60 Certified.



PUREGOLD MEDIUM CHIPS

PUREGOLD® GROUT is an easy mixing, organic-free, high-solids bentonite grout engineered to form a contaminant resistant seal without affecting groundwater chemistry. PUREGOLD GROUT is a technically superior replacement for traditional cement grouts. NSF/ANSI/CAN Standard 60 Certified.

"I have been in the distribution business for 35 plus years. The last 20 years I have been a distributor for CETCO in the West Texas area. My first 15 years we didn't know what drilling products were for. With the help of the people at CETCO we learned and promoted their product and it has become an everyday item in the domestic, irrigation, and environmental part of our inventory. When we have problems their people have answers and are willing to give hands on training if necessary. Is CETCO a really better product? We think so but for sure we can count on their people and that makes a difference to me."

- Steve Gray, Branch Manager Preferred Pump & Equipment, L.P. Amarillo, TX

GEOTHERMAL GROUTS

CETCO offers a complete line of grouting products for the geothermal heat loop installation industry. All CETCO Geothermal Grouts offer ease of mixing and pumping and have low permeabilities that exceed state guidelines. CETCO Geothermal Grouting products are designed to achieve a broad range of thermal conductivities from 0.40 to 1.21 Btu/hr/ft/F.

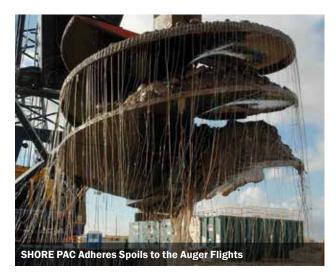


CETCO® GRANULAR GROUT mixes into a smooth bentonite grout that has no lumps and pumps easily. CETCO GRANULAR GROUT offers reduced friction going down the tremie pipe, and has a firm set-up. NSF/ANSI/CAN Standard 60 Certified.

CETCO® TC BOOSTER is an additive used to boost the thermal conductivity of CETCO GEOTHERMAL GROUT. The shape of the CETCO TC BOOSTER is a large flake which maximizes the thermal conductivity potential while reducing the amount of dust produced when utilizing the product in the field. NSF/ANSI/CAN Standard 60 Certified.

GEOTHERMAL GROUT™ is a specially blended high solids bentonite that can be mixed with sand in a two-part thermally conductive grouting material. GEOTHERMAL GROUT is an easy pumping grout that has been carefully developed to efficiently suspend silica sand GEOTHERMAL GROUT can be mixed to meet a range of thermal conductivity (TC) from 0.40 to 1.00 Btu/hr/ft/F (0.68 to 1.69 W/mK). NSF/ANSI/CAN Standard 60 Certified.

HIGH TC GEOTHERMAL GROUT™ is a specially blended high solids bentonite that can be mixed with sand in a two-part, thermally conductive grouting material. HIGH TC GEOTHERMAL GROUT is an easy pumping grout that has been carefully developed to efficiently suspend silica sand. HIGH TC GEOTHERMAL GROUT can be mixed to meet a range of thermal conductivity (TC) from 0.40 to 1.21 Btu/hr/ft/F (0.68 to 2.05 W/mK). NSF/ANSI/CAN Standard 60 Certified.



ACCU-VIS® (PHPA, 50% Active) is a liquid copolymer designed for fast field mixing, viscosity building, and clay/shale stabilization in aqueous drilling fluids. NSF/ ANSI/CAN Standard 60 Certified.

DE-CHLOR™ is a white granular crystal that neutralizes chlorine in municipal water.

INSTA-CLEAR™ DRY is a specially blended dry granular product designed for both polymer and water slurry. When added into either type of slurry, INSTA-CLEAR DRY reacts instantly to settle suspended solids and decrease turbidity.

MACRO-FILL™ is a granular, advanced superabsorbent loss circulation material that rapidly absorbs and retains large volumes of water from aqueous solutions.

FOUNDATION DRILLING

Our professional line of foundation drilling products comprise a suite of slurries and additives representing the industry's best combination of applied polymer technology. SHORE PAC® handles the most difficult soil conditions and our complete line of specialty additives have a proven track record of delivering the highest levels of performance and most advantageous total project economy of any slurry technology.

PREMIUM GEL® is a 200 mesh, 90 bbl yield sodium bentonite for freshwater drilling, slurry walls, and tunnel boring. PREMIUM GEL complies with API 13A Section 9, Specifications for Drilling Fluid Materials. NSF/ANSI/CAN Standard 60 Certified.

PUREGOLD® GEL is a minimum 90 bbl yield, organic-free, untreated, high quality bentonite drilling fluid for freshwater drilling, slurry walls, and tunnel boring. It complies with API 13A Section 10, Specifications for Drilling Fluid Materials. NSF/ANSI/CAN Standard 60 Certified.

SHORE PAC® is an easy mixing, water soluble, polymer supplied as a granular powder. SHORE PAC is designed for preparation of viscous earth-reinforcing fluids or slurries for a variety of drilling, trenching, and walling applications in the geo-construction industry. SHORE PAC is ideal for slurry trenching, diaphragm walls, drilled shafts/bored piles, and tunneling. NSF/ANSI/CAN Standard 60 Certified.

SLURRY SEAL™ is a specially synthesized polymer nano composite designed for use as a loss circulation management product with SHORE PAC polymer slurry in drilled shaft foundations.

SLURRY BUSTER™ DRY is an industrial grade oxidizing agent used to breakdown SHORE PAC polymer slurry.

SODA ASH is used to raise the pH of make-up water for bentonite and polymer drilling fluids by precipitating soluble calcium. Using SODA ASH will increase the performance of bentonite and polymer drilling fluids.

SODIUM BICARBONATE is added to a base drilling fluid as a pH neutralizing additive.

SUPER GEL-X® is an easy mixing, high viscosity 200 bbl yield freshwater drilling fluid produced from the highest grade Wyoming sodium bentonite. May be used for all types of freshwater mud rotary drilling. NSF/ANSI/CAN Standard 60 Certified.

SUPER THIN™ is a highly concentrated additive engineered to reduce drilling fluid viscosity and assist in settling solids. It offers immediate thinning action and reduces gel strength. NSF/ANSI/CAN Standard 60 Certified.

I have been distributing bentonite/polymer products for over 20 years and CETCO products since 1998. Under a solid foundation of deep customer satisfaction, CETCO's drilling products remain unsurpassed in delivering the greatest performance and value in today's marketplace. Their exceptional quality products have been instrumental in many high profile bridge and construction products on the West Coast as well as the rest of the country. CETCO's management teams and personnel have always been first class-professional and continue to provide outstanding customer support and service to our industry.

- Mike Hagy, Business Development Manager/Slurry Engineer PACO - Pacific American Commercial Company



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OUR STANDARDS. YOUR PEACE OF MIND.

"CETCO continues to go above and beyond our expectations. CETCO maintains a professional approach when working through difficult situations, and work closely with all parties involved to make sure the job gets done right the first time."

- Jamie Hendricks, Power Construction Company, LLC, Chicago, IL