

**CROSS REFERENCE OF PRODUCT EQUIVALENTS
by FUNCTION**

FUNCTION	M-I HDD, Mining & Waterwell	BAROID IDP	CANAMARA	MATEX
Water soluble surfactant	D-D	Condet	Drilling Detergent L	NC
Bentonite free drilling fluid	ENVIROBORE	Bio-Bore	NC	NC
3/4" sized sodium bentonite	KWIK-PLUG COARSE	Hole Plug	Enviroplug Coarse	NC
Granular sodium bentonite	KWIK-PLUG FINE	Casing Seal	Enviroplug #8	NC
3/8" sized sodium bentonite	KWIK-PLUG MEDIUM	Hole Plug	Enviroplug Medium	NC
Granular sodium bentonite	KWIK-PLUG MICRO	Benseal	Enviroplug (#16/20)	NC
High yield sodium bentonite	MAX-GEL	Quik-Gel	Extra High Yield	NC
Untreated sodium bentonite	GEL SUPREME	Aqua Gel	Wyoming Gel	NC
Water-swellable crystalline dry polymer	POLYSWELL	Diamond Seal	Aquasorb	DD Expand
One sack fluid system for HDD	MAXBORE-HDD	Bore-Gel	Tru Bore	NC
Water soluble cellulose polymer	POLYPAC R	Pac-R	Pro-Pac	MAPAC
Water soluble cellulose polymer (low vis.)	POLYPAC UL	Pac-L	NC	NC
Cellulose polymer in liquid suspension	LIQUID PAC	Liqui-Trol	Uni-Drill	Seismic 2 in 1
Liquid thinning polymer	RINGFREE	Aqua-Clear PFD	NC	DD 605 L
Liquid polymer (30% active)	POLY-PLUS	EZ-Mud	NC	DD 955
Liquid polymer (50% active)	POLY-PLUS 2000	Alcomer 120 L	Alcomer 120 L	Ultra Vis
Extra high molecular weight dry polymer	POLY-PLUS EHV	NC	NC	Form-A-Core
Readily dispersible dry polymer	POLY- PLUS RD	Poly Bore	Poly-Pro	DD 2000
Biopolymer for gel strength and suspension	DUO-VIS/SUPER-VIS	No-Sag	Pro-Yield	NC
Premium grade foamer	SUPERFOAM	Barafoam	NC	DD Foamer L
Standard grade foamer	SUPERFOAM AF	Quik Foam	Profoam	Foamer ES
Granular bentonite grout	GOPHER GROUT	Quik Grout	Grout Well DF	NC
Low solids grout (20%)	SMOOTH GROUT 20	Quik Grout	Grout-Well	NC
High solids grout (30%)	SMOOTH GROUT 30	Aquaguard	Enviroplug Grout	NC
Lubricant	ROD EASE	Vibra-Lube	NC	Torqueless
Environmentally safe hammer lubricant	HAMMER ES	NC	NC	RDO 302 ES
Rheology modifier	DRILPLEX-HDD	NC	NC	NC
Blasthole stabilizer	Frac Ease	NC	NC	Hi-Tech 100-50

BIO-ROD GREASE

TIME Bio Rod Grease is the ideal environmentally friendly solution for drill rod applications. It is designed to eliminate the shortcomings of the traditional biodegradable (vegetable-based) products. It is formulated from high purity vegetable oils and thickened with very shear stable lithium soap.

The additive package contains the latest in ashless, environmentally friendly rust and anti-wear technology. This technology provides rust protection not only while the rod is in service but also for extended periods while the rods are in storage. This product can function at temperatures well beyond the low and high temperature limits of other pure vegetable based products. Improved water resistance, low temperature pumpability and adhesion to the rod in service while minimizing torque are features. Bio-Rod Grease has been tailored to provide uniform distribution with fibrous or tackified products, providing greater lubrication between the rod and rock strata without increasing drag. Contains no mineral oils, barium, heavy metals, sulfur, chlorine, zinc or phenols.

Product Number	Description
GW-BDR-3-35	Bio-Rod Grease



ECO ROD GREASE

TIME Eco Rod Grease is a premium quality, eco-friendly and responsible diamond drill rod grease. It does not contain any heavy metals or environmentally damaging additives thereby significantly reducing the risk of environmental contamination.



TIME Eco Rod Grease uses a high performance over-based calcium sulfonate complex thickener. This diamond drill rod grease provides exceptional lubricity, high load carrying capability, thermal stability, rust protection and excellent water washout resistance. TIME Eco-Rod Grease uses polymer additives to give the product tacky fibers. These tacky fibers are combined with the innovative overbased calcium sulfonate complex thickener and heavy duty, high-quality base oil. This formulation creates excellent mechanical stability and supreme long lasting adhesion to the drill rod, preventing wipe off. TIME Eco Rod Grease does not contain any of the following harmful additives: antimony, barium, chlorine, lead, copper, graphite, phosphorus, sulfur or zinc.

Product Number	Description
GW-GDR-0-3	Eco Rod Grease



GATOR GRIP

This high quality diamond drill rod grease is made to adhere to the drill rods and provide good long lasting lubrication and water resistance while on the rod. This diamond drill rod grease is also made with adhesive polymers to increase adhesion to the rod and improve water washout resistance.



TIME Gator Rod Grease features thermal stability, rust protection and anti-wear additives.

Product Number	Description
GW-GDR-0-3	Gator Grip



ROD COAT B-700

Rod Coat B700 is primarily used to reduce vibration, especially in holes with lower water tables. It has superior resistance to water washing and is resistant to corrosion, wear and oxidation.

Limit to areas that are not environmentally sensitive.

Product Number	Description
ROD COAT	Rod Coat B-700



COPPER SUPREME SPECIAL BLEND

Copper Supreme Special Blend – Lead Free is the answer to the environmental restrictions and exposure concerns associated with the use of lead and zinc drill collar/tool joint thread compounds.



Contains a high percentage of copper flake combined with a proprietary blend of amorphous and synthetic graphites, suspended in a high temperature base grease.

Also contains a soluble extreme pressure package that is surface active (adheres to metal surfaces) and helps to provide the load carrying capability required by the high bearing stresses present in rotary shouldered connections.

A Bestolife Product
5 gallon pail

Product Number	Description
420-69	Copper Supreme Special Blend



ZN 50

ZN 50 is recommended for tool joints, drill bits, drill collars and other rotary shouldered connections.



It is a zinc-based thread compound made with finely powered metallic zinc. Available in 40%, 50% and 60% formulas. 10 lb pail.

Product Number	Description
420-60	ZN-50



3000

“3000” Metal Free Thread Compound was developed for rotary shouldered connections. It meets the environmental concerns relating to the use of lead and zinc.

This product is the first non-metal drilling compound that provides a leak-proof seal and prevents washouts under high pressure and high temperature. 3 gallon pail.



3010 Ultra

3010 Ultra is an extension of the 3000 formulation with enhanced low temperature application/adherence properties designed for use in the coldest, wettest operating conditions.

Applies easily to cold, wet connections exposed to seawater in ambient temperatures as low as -49° F to -45° C. Also effective for use on open gear jackup legs. 17 kg pail.

Product Number	Description
420-103	3000
420-55	3010 Ultra



4010 NM

4010 NM is the fourth generation of the highly successful Bestolife family of thread compounds for rotary shouldered and premium connections, designed and developed to address environmental concerns in ecologically sensitive areas of the world.



Combines the excellent low temperature applications of 3010 Ultra with superior downhole galling resistance and enhanced exotoxicological properties. As well as cold wet seawater environments, 4010 NM also provides optimum protection in the deepest, hottest holes. 10 lb pail.

Product Number	Description
420-118	4010 NM



DOPE BRUSH

Dope brushes come with plastic guards on handle. Size 2 (available in other sizes) 12/case.



Product Number	Description
64002	Dope Brush



DD 955

DD 955 is a multi-charged liquid viscosifier and formation stabilizer specifically for use in areas plagued with shale and clay instability problems. Due to its ionic charges, DD 955 is absorbed directly onto shales and clays, thereby preventing the water damage that causes loss of core and hole stability. Once absorbed onto the formation, the stabilizing effect imparted by DD 955 will remain resistant to any chemical changes in overall mud properties caused by varying geological and drilling conditions. DD 955 effectiveness is enhanced when used with Bio-Cut Plus and Torqueless. 20 litre pail.



Product Number	Description
420-10	Max Gel

MATEX

DD 1200

DD 1200 is an ultra high molecular weight liquid viscosifier and fluid loss reducer which can be used in either fresh or brine water. It is used in the diamond, rotary and seismic drilling industries. DD 1200 rapidly builds viscosity and is very resistant to any contaminants that may be encountered while drilling. It has excellent shear resistant properties which prevent viscosity breakdown after it is pumped downhole and circulated back to surface.



Environmentally safe
20 litre pail.

Product Number	Description
420-04	DD1200

MATEX

DD 2000

DD 2000 is an environmentally safe, very high molecular weight, powdered viscosifier that can be used in either fresh or brine water. It can be used in diamond, rotary or percussive drilling. It imparts excellent viscosity yield. It is a superior product for stabilization in overburden, sand and gravel areas. DD 2000 is effective in drilling conditions where groundwater temperatures exceed 150° F. DD 2000 reduces transportation costs for drilling because of its concentrated nature.



DD 2000 combined with Torqueless reduces lost casing.

Available in 1 Kg or 20 L sizes.

Product Number	Description	Size
420-05	DD2000	1 kg
420-06	DD2000	20 L

MATEX

ENVIRO-BORE®

Enviro-Bore® is a dry powder which when mixed with fresh water provides a clay-free, biodegradable drilling fluid. It was specifically designed for HDD and remediation projects.

Enviro-Bore enhances porosity and permeability of the formation; produces a clay-free drilling fluid; provides improved viscosity for efficient hole cleaning; provides high yield point and gel strength for cutting suspension and transport; improves borehole stability for easy well installation; reduces filtration rate in unconsolidated formation.

Non-toxic and environmentally safe.
50 lb pail

Product Number	Description
ENVIRO-BORE	Envio-Bore

MI SWACO

MAX GEL

Max Gel is a premium 220-bbl Wyoming bentonite blended with special extenders producing a viscosifier that will yield more than twice as much viscosity as regular Wyoming bentonite.

Max Gel is a high –yielding, easily mixed, superior mud-making bentonite for fresh water.

Max Gel is used in the following applications to rapidly build mud viscosity and provide superior hole cleaning, as well as to help control lost circulation formation sloughing and promote hole stability in unconsolidated formations: mineral exploration, horizontal directional drilling, blast holes, shaft drilling, etc. Packaged in 50 lb, multi- wall, paper sacks

Product Number	Description
420-24	DD 955



POLY-PLUS®

Poly Plus is a high molecular-weight, anionic liquid designed to provide cuttings encapsulation and shale stabilization



Poly Plus acts as a viscosifier, friction reducer and flocculent while providing some fluid-loss control. Can be used in mud systems utilizing makeup waters from fresh to saltwater.

Poly-Plus provides excellent cuttings encapsulation and limits cuttings dispersion; provides improved shale stabilization; enhances the removal of drill solids; liquid product for easy mixing and rapid yield; low pour point of -20°F (-28°C) for use in cold climates; improves the lubricity of most mud systems; aids in preventing balling on the bit, stabilizers and bottom-hole assemblies by coating and lubricating solids. 20 litre pail.

Product Number	Description
POLY PLUS	Poly Plus



POLY-PLUS® 2000

Poly Plus 2000 is a multi-functional synthetic copolymer developed for use in fresh water, potassium and saltwater based drilling fluids.

It is not subject to premature activation inside the pail or drum or phase separation. It has excellent freeze-thaw stability and provides the same benefits as regular Poly Plus but at lower concentration due to the higher concentration of active product. 20 litre pail.

Product Number	Description
POLY PLUS 2000	Poly Plus 2000



POLY-PLUS® RD

Poly Plus RD is a readily dispersible polymer designed to provide cuttings encapsulation and shale stabilization. It is formulated for easy mixing with improved dispersion to eliminate “fish eyes”. This is beneficial when rapidly mixing either large quantities or high concentrations or where good mixing equipment is unavailable.



Poly-Plus RD also acts as a viscosifier, friction reducer, flocculant and provides some fluid-loss control. 5 gallon pail or 50 lb multi-walled paper sacks

Product Number	Description	Size
POLYPLUSRDKG	Poly Plus RD	1 kg
POLYPLUSRD	Poly Plus RD	25 kg



ULTRAVIS II

Ultravis II is a highly concentrated product that rapidly develops into a very high viscosity fluid when mixed with water. It is used in diamond, horizontal, rotary or seismic drilling applications.



Ultravis II provides viscosity yields 40 – 50% greater than conventional liquid polymers and can be used in fresh or brine water. It is an excellent inhibitor against shales, clays, fractured zones, sand and blocky formations, and contaminants. Ultravis is resistant to viscosity change under high water temperature conditions and has superior shear resistant properties.
20 litre pail

Product Number	Description
ULTRAVIS II	Ultravis II



LUBRICANTS

LINSEED SOAP

Linseed soap is an environmental friendly lubricant used in mining and drilling operations. It is principally used as a core release lubricator. It is an amber coloured opaque paste made up of natural fatty acids.



It is phosphate free and biodegradable; disposal of waste solution presents no problem. Available in 11 and 23 kg pails.

Product Number	Description	Size
420-07	Linseed soap	11 kg
420-31	Linseed soap	23 kg



ROD EASE

Rod Ease is a superior lubricant for HDD, coring and rotary drilling.

Rod ease reduces torque, prevents rust and scale, increases penetration rates, extends bit and mud motor life, increases mud motor efficiency, reduces wear on rods and equipment, maximizes rig potential and steering control and enhances the effectiveness of powdered drilling additives.

Rod ease is environmentally safe.
20 litre pail.

Product Number	Description
M0001929	Rod Ease



TORQUELESS

Torqueless is effective in lubricating down-hole consumables, producing increases in both bit-life and penetration rates in diamond drilling operations. Torqueless inhibits swelling of clay-like materials; is non-sheening when accidentally introduced into a water course; is extremely effective for lubricating both down-hole hammers and protecting against drill pipe wear during HDD, eliminating the need for rock drill oil. It protects drill rod wear when using wedges and increases tool joint life by reducing torque in the hole.



Torqueless also enhances the effectiveness of powdered mud systems (bentonites, polymers or pacs) Combined with appropriate fluids and mixing systems, Torqueless will reduce stuck drill rods and lost casing in squeezing ground conditions. 20 litre pail.

Product Number	Description
420-15	Torqueless

MATEX

FLUID LOSS CONTROL

MAPAC

Mapac is a dry powdered organic polymer which forms a clean, colloidal solution in fresh or brine water. It is used to reduce fluid loss, increase viscosity, and/or to extend bentonite-based drilling fluids.



Mapac can be used to enhance bentonite systems improving suspension and well cake building properties and in air-drilling foams to improve hole-stabilizing and cleaning capabilities. 20 litre pail.

Product Number	Description
420-13	Mapac

MATEX

PLATINUM PAC

Platinum Pac is a readily dispersible water-soluble polymer, designed to control fluid loss and increase viscosity in water-base muds. In water-base drilling, it is used as a filtrate reducer, lubricant and borehole stabilizer.



Platinum Pac controls fluid loss and produces a thin, slick, tough filter cake; it reduces friction increasing the lubricity of the drilling fluid; inhibits the hydration of drill solids and encapsulates the drill solids for easier removal; exhibits superior mixing in low-shear environments; is more readily dispersible than conventional dry PAC polymers; effective in low concentrations, functions over a wide range of salinity, hardness and pH levels. 50 lb bags.

Product Number	Description
M0002822	Platinum Pac

Mi SWACO

SODA ASH

Soda ash is used in water-base mud as a source of carbonate ions to precipitate calcium, increase pH or flocculate spud mud. Soda ash is the common name for sodium carbonate (Na₂CO₃). It is a weak base which is soluble in water and dissociates into sodium (Na) and carbonate (CO₃) ions in solution.

Soda ash is primarily used to reduce soluble calcium in water-base drilling muds and makeup waters. Other uses include increasing pH and flocculating spud muds. 50 lb multi-wall, paper sacks.

Product Number	Description
M0004182	SODA ASH



AMBEX ANCHORING CAPSULES

AMBEX™ Anchoring Capsules – AAC are encapsulated cementitious thixotropic non-shrink grout which can be used up to 0° F or -17° C and in wet conditions.



Features:

- A hydraulic binder with an alumina content of approximately 40%
- Resistant to abrasion, mechanical shock, intermediate temperature exposure or where other high performance properties are required of cement
- Imparts excellent mechanical strengths to mortars and concretes

Benefits:

- Fast drying
- Rapid hardening
- Easily mixed with water
- Minimal shrinkage
- No loss of product with overhead applications

Sold by bag, in capsules: each capsule: 25 mm x 300 mm
42 capsules per bag; bag weight: 25 lbs.

Other sizes available on request.

Product Number	Description
420-25	Ambex grout

GROUTS & SEALANTS

DD 605L

DD 605L is an environmentally safe drilling fluids thinner. It is a synthetic organic liquid polymer which lowers mud viscosity and gel strengths of all conventional water based drilling muds.



DD 605L also aids in filtration control and can be used to overcome differential sticking of rods as well as treat mud rings. 20 litre pail.

Product Number	Description
DD605L	DD 605L



KWIK-PLUG FINE & MICRO

Kwik-Plug Fine & Micro are granular bentonite products composed of dried sodium-montmorillonite clay. It may be used to control lost circulation in mud rotary or coring operations. It can also be used as a sealant for earthen structures and dry, shallow-hole abandonment. 50 lb heavy-duty, multi-wall, waterproof sacks.

Product Number	Description
M0004866-FINE	Kwik-Plug - Fine
M0004866-MICRO	Kwik-Plug - Micro



KWIK-PLUG MEDIUM & COARSE

Kwik Plug Medium & Coarse are screen-sized bentonite composed of a naturally-occurring clay which is used to seal and plug earthen boreholes. It will travel through water standing in the hole and reach the bottom with minimum hydration or swelling. The annular space can be completely filled. When the annular space is completely filled, Kwik plug forms an effective, long-term plug.

Medium is 1/4" and recommended for annular spaces of 3/4" or more; Coarse is a 3/8" coated pellet and recommended when the annular space is 1 1/2" or more. 50 lb heavy-duty, multi-wall, waterproof sacks.

Product Number	Description
M0004318	Kwik-Plug – Med
M004320	Kwik-Plug – Coarse



GOPHER GROUT

Gopher Grout is an easy to use granular bentonite grouting composition containing high-swelling sodium montmorillonite clay. It is designed for use in water wells and monitoring wells, for sealing the annular space around well casing and for plugging drilled holes and abandoned wells. Gopher Grout contains no organic additives or polymers.

Gopher Grout is inorganic, non-fermenting and non-toxic. It is easily mixed and handled. It creates a permanent, flexible seal preventing entry of contaminants. After grout is set its firm texture provides structural stability. 5 lb heavy-duty, multi-wall, waterproof sacks.

Product Number	Description
GOPHER GROUT	Gopher Grout



SMOOTH GROUT™ 20
SMOOTH GROUT™ 30

Smooth Grout is an easy-to-use bentonite-grouting composition containing high-swelling sodium montmorillonite clay. It is designed for sealing the annular space around a well casing and for plugging drilled holes and abandoned wells, and for use in water wells and monitoring wells.

Both Smooth Grouts are a one-sack formulation that mixes with freshwater to yield either a 20% or 30% pumpable grouting slurry with an extended working time.

- Smooth Grout 20 develops lower-solids slurries up to 20% total active solids.
- Smooth Grout 30 develops lower-solids slurries up to 30% activity.

50 lb multi-wall, paper sacks.

Product Number	Description
SMOOTH GROUT 20	Smooth Grout 20
SMOOTH GROUT 30	Smooth Grout 30



SUPER PLUG

Super Plug is designed to offer superior sealing characteristics where low-permeability, flexible seals are required. Super Plug can be used to plug and abandon any type of drilled hole.

Super Plug is a proprietary blend of bentonite, hydroxides and silicates. It is 100% inorganic, non-toxic and environmentally safe.

50 lb multi-walled moisture resistant bags.

Product Number	Description
SUPERPLUG	Super Plug



PLATINUM FOAM (EFP 1102)

Platinum Foam is a water soluble biodegradable foaming agent. This material is designed exclusively for mineral and water-well drilling. It has the ability to foam in fresh, brackish or salty water. Its lubricating properties make it suitable for use with downhole hammers. It improves hole cleaning and penetration rates.
5 gallon pail.

Product Number	Description
PLATINUM FOAM	Platinum Foam



ROCK DRILL OIL

FRAC EASE

FracEase is a rock drill lubricant that removes cuttings from the hole and lifts them to the surface. This product is especially effective in fractured ground conditions. It stabilizes the hole and reduces redrills. It does not separate on sitting.



Recommended with TIME's Ground Stabilizing Pumping Unit.
5 gallon pail.

Product Number	Description
420-02	FRACEASE



HAMMER ES

Hammer ES is an environmentally safe rock drill lubricant that performs more effectively than conventional rock drill oils and reduces contamination of surface and groundwater.
5 gallon pail.



Product Number	Description
HAMMER ES	Hammer ES



PLATINUM LUBE

Platinum Lube is a superior lubricant for HDD, coring and rotary drilling. It mixes instantly and is not affected by water quality. The advantages of Platinum Lube are: reduces torque, prevents rust and scale, increases penetration rates, extends bit and mud motor life, increases mud motor efficiency, reduces wear on rods and equipment, maximizes rig potential and steering control, enhances the effectiveness of powdered drilling fluid additives.
Environmentally safe.
5 gallon pail.

Product Number	Description
PLATINUM LUBE	Platinum Lube



DD EXPAND

DD Expand is used in lost circulation as a plug material. It allows drilling through highly fissured and fractured formations and can effectively shut off water flows and open voids. Used in the oil and gas diamond, rotary and seismic drilling industries. 20 litre pail



Product Number	Description
420-08	DD Expand - Fine
420-09	DD Expand - Coarse

MATEX

POLYSWELL

Polyswell is a copolymer utilized in lost circulation that will expand to 200 times its volume in freshwater.

Polyswell is used to fill or seal fractures. Polyswell can also be spotted in caving zones to reduce caving problems. Due to its swelling capacity and variability in size Polyswell will accumulate in a variety of fracture sizes.

Environmentally safe.
5 gallon pail.

Product Number	Description
POLYSWELL	Polyswell

MISWACO

MARSH FUNNEL

The Marsh Funnel is used for routine viscosity determinations and flow properties of drilling mud. The Marsh Funnel is made of rugged, break resistant gray plastic that also resists temperature change deformation. Volumetric accuracy is assured. The plastic handle provides insulation to help protect hands during testing. A metal orifice ensures accurate readings.



VIS CUP

The Vis Cup is designed specifically for use with the Marsh Funnel. It is made of high impact plastic.

pH strips

pH is critical to optimizing your drilling fluids.

pH should be checked with pH strips on a regular basis or when your water source changes.

Product Number	Description
420-28	Marsh Funnel
420-29	Vis Cup
Call for info	pH strips

MUD BALANCE

The mud balance is the instrument generally used to determine the accurate measurement of mud weight within 1/10 lb/gal or 1/2 lb/cu ft.

Features:

- Break resistant construction
- Plastic carrying case

Consists of 7 parts:

1. base
2. graduated arm and cup
3. lid
4. knife edge
5. rider
6. built-in spirit level
7. counterweight



Product Number	Description
420-106	Mud Balance