



# **PRODUCT DATA SHEETS**



## Drilling Fluid Products

For the HDD, Exploration, Mining, Water Well and Civil Construction Industries

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# ECODRUM & ECOBUCKET

SUSTAINABILITY FOCUSSED PACKAGING



**YOUR PARTNER  
IN INNOVATIVE  
DRILLING FLUIDS**

[mudex.com.au](http://mudex.com.au)

# AIDING IN SUPPORT OF OUR ENVIRONMENT

- **BUILT TO LAST**

The ultra-tough, thick-walled cardboard can withstand up to 180 kilograms of compressive strength before it will begin to falter

- **100% BIODEGRADABLE CARDBOARD**

Our cardboard is recycled which is initially sourced from sustainable forests. The cardboard is 100% biodegradable.

- **ERGONOMICALLY DESIGNED**

With 6 different locations to press in and create finger leverage points, it couldn't be easier to pour the product with minimal risk of creating any spills.



- **90% LESS PLASTIC**

Operate sustainably, even in remote locations. EcoDrums & EcoBuckets boast a robust inner bladder and double shrink wrap for weatherproof protection, all while slashing plastic usage by 90%! Reduce waste, lower disposal costs, and simplify storage – choose EcoDrums & EcoBuckets for a greener future.



- **WEIGHT REDUCTION**

Our units are designed with a weight of approximately 15 kilograms (kg), addressing a common challenge in the field. Traditional packaging, such as 25kg plastic bottles, can exceed safe manual handling limits set by industry regulations. This lighter weight ensures compliance with safety protocols, minimizes the risk of worker injury, and simplifies logistics, particularly on remote sites with limited resources.

**MUDEX.COM.AU**

Our EcoDrums and EcoBuckets are proudly Australian Made accumulating 87% of Mudex products being proudly Certified as Australian Made.



## • EASY TO OPEN

Say goodbye to wrestling with drum lids! Enviroboxes boast user-friendly, easy-open lids and a wider mouth compared to standard drums. This innovative design streamlines your workflow, eliminating the need for pry tools and minimizing spills during pouring.



## • WATERPROOFING

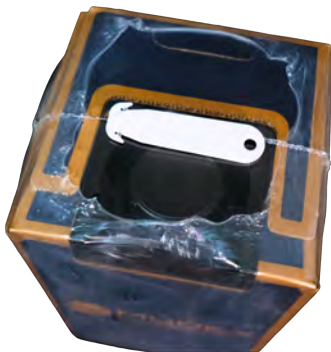
EcoDrums and EcoBuckets utilise double shrink wrap for maximum weather protection, eliminating the need for environmentally harmful wax coatings on the biodegradable cardboard construction.

## • CHEAPER FREIGHT

Our innovative “Potato Box” design utilizes sturdy cardboard walls to securely pack 50 units, transporting a whopping 750 liters of liquids per pallet. This innovative approach surpasses the standard of 32 x 20-liter plastic drums (660 liters) at the same freight cost, offering significant cost savings and reduced environmental impact.

## • BOX CUTTERS

Each freight box includes a box cutter for effortless opening through finger holes and simplified box breakdown after use, maximizing storage space.



## • ECODRUM & ECOBUCKET

The EcoDrum and EcoBucket are revolutionising on-site packaging by offering a sustainable alternative that significantly reduces plastic waste. These innovative containers boast a 15-liter capacity, ideal for storing and transporting a variety of liquids or dry powders. Eco-conscious design eliminates unnecessary plastic without compromising on strength or durability. Whether your needs involve liquids or dry materials, EcoDrums and EcoBuckets provide a secure and reliable packaging solution. Please note: Depending on the specific product being stored, the weight may vary slightly.



# ADVANCING SUSTAINABILITY WITH ECO-CONCIOUS DECISIONS



**YOUR PARTNER  
IN INNOVATIVE  
DRILLING FLUIDS**

**CONTACT**

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**LEARN MORE:  
[MUDEx.COM.AU](http://MUDEx.COM.AU)**



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Mudex Product	AMC	Baroid	Description
AIR SEAL	Borehole Stabiliser	-	Air drilling hole stabiliser
BIO HAMMER OIL ES			Low-cost biodegradable hammer oil
BIO HAMMER OIL	Bio Hammer Oil	IDP-479	Biodegradable hammer oil
BIO HAMMER OIL G	-	-	Biodegradable hammer oil with graphite
BIO HAMMER OIL NT	-	-	Biodegradable hammer oil with nanotech particles
BIOCIDE	Biocide G	-	Bactericide
BORE CLEANSER	Well Clean	Aqua-Clear-AE	Water well development product
CLAY BREAKER	Liqui Sperse	Aqua-Clear PDF	Clay dispersant
CLAY FIX	Clay Coat	-	Liquid clay inhibitor
CLAY STAR MT	Shalehib Ultra		Liquid clay and shale inhibitor
CORE X	Superlube	Bara lube Gold	Diamond drilling lubricant for fresh water
DD 5000	Torq Guard	-	High performance biodegradable lubricant
DEGREASER	Triple 4	-	Solvent free degreaser
DRILLTREX	Filtrex		Formation stabilising additive
ENVIRO VIS	Bio Vis	Bio-Bore	Biodegradable natural polymer
EZY WATER	Water Conditioner	-	Water softener
FLASH GROUT	Hard Set	-	Flash setting grout
FLOC X	Floc DD	Bara Floc	Flocculant
FOAM X	Super Foam	AQ-2 XG	Foaming agent
FOAM X PLUS	HV Foam	Ultrafoam EU	High performance foaming agent
FOAM X ULTRA	HV Foam SW	Quik-Foam HP	Foam agent for salt water
GEL X 180	Gel	Aqua gel	Australian Sodium bentonite
STARGEL PREMIUM	Gel Xtra	Quik Gel	Wyoming Sodium bentonite
GEL X SW	Vis Gel SW	Tunnel Gel SW	Saltwater bentonite
GEL X ULTRA	Vis Gel	Bore Gel	Specialised Waterwell & HDD complete fluid
GEO BOND 2.0	-	-	Specialised powder polymer drilling fluid
GEO BOND LIQUID	-	-	Specialised liquid polymer drilling fluid
GROUND STABILISER RC	Ground Stabiliser	-	Specialty product for stabilising RC holes
GROUT X	Gyp Set	Quik Set	Gypsum cement
KLA BORE	Corewell	-	Core recovery polymer
LRG	Liquid Rod Grease	-	Liquid Rod Grease
LIQUID VIS TROL	Liquid Super Trol	Liqui Trol	Cellulose Polymer in liquid form
MAXIDRILL	Ezee Drill	-	Blended viscosifier and lubricant
MAXIDRILL HV	-	-	High viscosity blended viscosifier and lubricant
PENETREX	Bit Guard	-	Penetration enhancer for Diamond Drilling
POLY TROL	-	Poly Bore	Blended viscosifier and fluid loss product
POLY VIS 2000	FS2000	Quik Mud D-50	High performance liquid Polymer
POLY VIS DRY	-	-	Dispersive Rapid Yield dry polymer
POLY VIS HV	CR-650	EZ-Mud DP	High Yielding Dry Polymer
POLY VIS LIQUID	Liqui Pol	EZ-Mud	Liquid polymer
POLY VIS LV	Clay Doctor	Quik Mud Gold	Low viscosity dry polymer clay stabiliser
PRODRILL	-	-	One drum specialty polymer lubricant blend
SEAL X	Shur Seal	N-Seal	Lost circulation material
STAR PLEX	-	-	HDD rheology modifier for large diameters
TRUCKWASH	Maxi Wash	-	Truck wash
TUBE LUBE	Tube Lube	Core Lube	Core barrel soap
UNIVERSAL	Universal	IDP-607	Biodegradable lubricant for poor quality water
VIS PAC L	AMC Pac L	PAC L	Low viscosity cellulose polymer
VIS PAC LD	Ezee Pac L		Dispersible low viscosity Cellulose Polymer
VIS PAC R	AMC Pac R	PAC R	High viscosity cellulose polymer
VIS PAC RD	Ezee PAC R	-	Dispersible High viscosity Cellulose Polymer
VIS TROL	Aus Trol	Quik-Trol Gold	High performance Cellulose Polymer
VIS TROL RD	Ezee Trol	-	Dispersible High performance Cellulose Polymer
X DET 202	Det Xtra	Con-Det	Drilling detergent
X FRAC (DD)	-	-	Specialty lost circulation material
X PLUG (COARSE)	Plug	Diamond Seal	Coarse swelling polymer for lost circulation
X SHEAR		-	Shear stabilising system
X TORQUE	Torq Free Extra	NXS-Lube	High Performance Lubricant
XAN VIS	Xan Bore	No Sag	Biopolymer for enhanced gel strength
XPANDA FOAM A & B	Eco Grip A & B	Plug Foam A & B	Polyurethane foam
XT ROD GREASE	Rod Grease Extra Tacky	Vibra-Grease	Diamond drilling rod grease
ZN-50	DRTG ZN50	-	Thread grease

# AIRSEAL

Hole Stabilizer for Air Drilling

## DESCRIPTION

**AIRSEAL** is a liquid blend of high-quality polymers designed to stabilize formations in air drilling by sealing fractures and forming a polymer membrane on the formation walls during the drilling process.

## APPLICATIONS

**AIRSEAL** is used in all air drilling operations to control loose and caving formations whilst drilling. Added directly down the rods or injected into the airstream the product is blown into the annulus and forms a high strength membrane on the borehole wall and seals fractures in the formation.

## ADVANTAGES

- Can be injected directly to the air stream
- Reduces hole collapsing and collaring
- Makes it possible to drill unconsolidated formations
- Reduces the need to redrill unstable zones
- Environmentally friendly and non-toxic
- Easy to use

## TYPICAL PROPERTIES

Physical Appearance	Light Yellow Liquid
pH (1% Solution)	7.0



## USAGE

Drilling Application / Desired Result	Litres per 1000
General usage	4 – 6

Dosage will depend on hole conditions.

Contact your nearest Mudex representative for further details

# BIO HAMMER OIL G

Biodegradable Hammer Oil infused with Graphite.

## DESCRIPTION

**BIO HAMMER OIL G** is a premium quality adhesive down hole hammer lubricant formulated to impart wear protection to moving metal parts. BIO HAMMER OIL G contains extreme pressure, anti-wear, and anti-rust additives and is further enhanced with graphite as a solid phase lubricant for exceptional performance under extreme service conditions

## APPLICATIONS

**BIO HAMMER OIL G** is specially formulated to provide excellent protection for pneumatic percussion tools such as rock drills and downhole hammers. It has high load-carrying capacity to protect against wear and seizure of sliding metal surfaces under heavy or shock-load conditions. It has good adhesiveness to metal surfaces in the presence of moisture, and contains inhibitors to protect against rust and corrosion of the hammers internal parts when the tool is not being used. It has good oxidation resistance and thermal stability at high temperatures for long service life.

Many hammer oils are fortified with Molybdenum Disulphide and as such provide health and environmental risks due to inhalation and the discharge of used oil into sensitive ecological areas and groundwater. BIO HAMMER OIL G is safe and environmentally friendly and does not propose health risks.

## ADVANTAGES

- Contains graphite for superior wear and protection
- Extends hammer life and reduces maintenance costs
- Minimizes friction and wear in moving metal parts
- Imparts a very high film strength to moving parts
- Biodegradable and environmentally friendly
- Available in 150, 220, 320, and 460 viscosity grades
- Minimal carbon deposits
- Efficient and cost effective.

## TYPICAL PROPERTIES

Physical Appearance	Dark brown to black liquid
pH	N/A



## USAGE

Hole Size	Consumption (based on 350 psi air)
3.5" – 5.75" (88.9mm – 146mm)	1.0 – 2.5 lts per hour
6" – 8.5" (152.4mm – 216mm)	2.5 – 3.0 lts per hour
8.5" – 8.75" (216 – 222.25mm)	3.0 – 3.25 lts per hour
9" – 20" (228.6mm – 508mm)	3.25 – 7.5 lts per hour

# BIO HAMMER OIL NT

Biodegradable Hammer Oil infused with Nano Technology.

## DESCRIPTION

**BIO HAMMER OIL NT** is a completely unique, premium quality adhesive down hole hammer lubricant formulated to impart wear protection to moving metal parts. BIO HAMMER OIL NT contains extreme pressure, anti-wear, and anti-rust additives and is further enhanced with Nano sized particles that act as a solid phase lubricant.

The Nano sized particles infused into BIO HAMMER OIL NT have been through rigorous laboratory and field testing. No other bio hammer oil on the market today can boast the independent laboratory proven, long lasting protection provided by BIO HAMMER OIL NT.

## APPLICATIONS

**BIO HAMMER OIL NT** is specially formulated to provide unparalleled protection for pneumatic percussion tools such as rock drills and downhole hammers. It has high load-carrying capacity to protect against wear and seizure of sliding metal surfaces under heavy or shock-load conditions. It has good adhesiveness to metal surfaces in the presence of moisture and contains inhibitors to protect against rust and corrosion of the hammers internal parts when the tool is not being used. It has good oxidation resistance and thermal stability at high temperatures for long service life.

BIO HAMMER OIL NT is safe, environmentally friendly and does not propose health risks.

## ADVANTAGES

- Contains nano sized particles that provide the ultimate wear protection.
- Extends hammer life and reduces maintenance costs.
- Minimizes friction and wear in moving metal parts.
- Imparts a very high film strength to moving parts.
- Biodegradable and environmentally friendly.
- Available in 150, 220, 320, and 460 viscosity grades.
- Minimal carbon deposits.
- Efficient and cost effective.

## TYPICAL PROPERTIES

Physical Appearance	Dark brown to black liquid
pH	N/A



## USAGE

Hole Size	Consumption (based on 350 psi air)
3.5" – 5.75" (88.9mm – 146mm)	1.0 – 2.5 lts per hour
6" – 8.5" (152.4mm – 216mm)	2.5 – 3.0 lts per hour
8.5" – 8.75" (216 – 222.25mm)	3.0 – 3.25 lts per hour
9" – 20" (228.6mm – 508mm)	3.25 – 7.5 lts per hour

# BIO HAMMER OIL

Biodegradable Hammer Oil.

## DESCRIPTION

**BIO HAMMER OIL** is a premium quality adhesive down hole hammer lubricant formulated to impart wear protection to moving metal parts. BIO HAMMER OIL contains extreme pressure, anti-wear, and anti-rust additives and is available in 150, 220, 320, and 460 viscosity grades. BIO HAMMER OIL is Biodegradable and non-hazardous.

## APPLICATIONS

**BIO HAMMER OIL** is specially formulated to provide excellent protection for pneumatic percussion tools such as rock drills and downhole hammers. It has high load-carrying capacity to protect against wear and seizure of sliding metal surfaces under heavy or shock-load conditions. It has good adhesiveness to metal surfaces in the presence of moisture, and contains inhibitors to protect against rust and corrosion of the hammers internal parts when the tool is not being used. It has good oxidation resistance and thermal stability at high temperatures for long service life.

Many hammer oils still in use are based on mineral oils and as such provide health and environmental risks due to inhalation and the discharge of used oil into sensitive ecological areas and groundwater. BIO HAMMER OIL is safe and environmentally friendly and does not propose health risks.

## ADVANTAGES

- Extends hammer life and reduces maintenance costs
- Minimizes friction and wear in moving metal parts
- Imparts a very high film strength to moving parts
- Biodegradable and environmentally friendly
- Available in 150, 220, 320, and 460 viscosity grades
- Minimal carbon deposits
- Efficient and cost effective

## TYPICAL PROPERTIES

Physical Appearance	Dark brown to black liquid
pH	N/A



## USAGE

Hole Size	Consumption (based on 350 psi air)
3.5" – 5.75" (88.9mm – 146mm)	1.0 – 2.5 lts per hour
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8.5" – 8.75" (216 – 222.25mm)	3.0 – 3.25 lts per hour
9" – 20" (228.6mm – 508mm)	3.25 – 7.5 lts per hour



# BIO TACK

Multi purpose biodegradable rod grease and thread compound

## DESCRIPTION

**BIO TACK** is a multi purpose biodegradable, non-toxic heavy duty grease formulated from vegetable oils, tackifiers and thickening agents producing a very stable diamond drill rod and thread compound with additives that provide protection from corrosion, wear and oxidation. BIO TACK is suited for use in areas with environmental concerns. BIO TACK contains no hydrocarbon, metals, barium or environmentally unacceptable solvents.

## APPLICATIONS

**BIO TACK** is very tenacious and is recommended for underground or surface applications. It is compatible with all types of drilling fluid systems. BIO TACK is also very effective in dry hole conditions without fluid returns. As a thread compound it is used for heavily loaded components, subject to arduous conditions, hot, dusty or wet environments. A wide variety of applications such as thread lubricant and sliding surfaces and in particular drill rod threads.

## ADVANTAGES

- Biodegradable
- Non Toxic
- Excellent thread compound
- Extends rod life and reduces maintenance costs
- Superior resistance to water washing and centrifugal separation
- Corrosion, wear and oxidation resistance
- Minimizes friction and wear on the drill string and the threads
- Applies to wet pipe.

## TYPICAL PROPERTIES

Physical Appearance	Viscous Brown to Amber liquid
Specific Gravity	0.9

## USAGE

Apply a generous amount smeared on the outside of the drill rods or the threaded sections of the drill rod tool joint.

# BIOCIDE

Drilling Fluid Bactericide

## DESCRIPTION

**BIOCIDE** is a biodegradable bactericide used in drilling fluids to stop microbial attack and is effective at controlling slime caused by micro-organisms in drilling fluids. BIOCIDE is effective against aerobic and anaerobic bacteria.

## APPLICATIONS

**BIOCIDE** is utilized to control bacteria in drilling fluids and protect polymers, which are susceptible to bacterial degradation.

## ADVANTAGES

- Highly concentrated product and economical
- Biodegradable, environmentally acceptable, and non-hazardous
- Broad range of applications
- Effective in most water types
- Mixes easily without agitation.

## TYPICAL PROPERTIES

Physical Appearance	Yellow brown liquid
pH(1% solution)	10.0 - 11.0
Solubility	100%



## USAGE

Drilling Application / Desired Result	Litres per 1000
Drip feed into flow line	2 – 5

# BORE CLEANSER

Break Back Additive for Water Wells

## DESCRIPTION

**BORE CLEANSER** is a highly concentrated break back agent and clay dispersant used to develop and clean up water wells.

## APPLICATIONS

**BORE CLEANSER** is used to remove bentonite and naturally occurring clays from the bore hole and around the gravel pack and screens during the development process of the water well by breaking down bentonite and clays and breaking up the filter cake formed by the drilling fluid.

## ADVANTAGES

- Non toxic
- Soluble in all water and easy to use
- Can be used as a clay dispersant
- Increase well productivity

## TYPICAL PROPERTIES

Physical Appearance	White powder
pH(10% Solution)	7.0 – 8.0
Specific Gravity	1.21



## USAGE

Drilling Application / Desired Result	Kilograms per 1000
General Usage	4 – 6



# CLAY BREAKER

Clay Dispersant

## DESCRIPTION

**CLAY BREAKER** is a phosphate-free, thermally-stable thinner and dispersing agent, acting quickly to break up mud rings and clay deposits on the bottom hole assembly (BHA). CLAY BREAKER is also very effective at controlling viscosity in water-based drilling fluids.

## APPLICATIONS

**CLAY BREAKER** is primarily used to prevent bit balling, mud rings and to control drilling fluid viscosity. It also breaks down reactive clays that have caused stuck pipe. CLAY BREAKER can be used by itself or mixed with small amounts of POLY VIS HV/RD products for increased durability and lubrication

## ADVANTAGES

- Minimizes bit and BHA balling and mud rings
- Disperses clays and quickly penetrates sticky clays that may cause stuck tooling
- Works quickly to alleviate hole problems and reduce costly pulling times or lost pipe
- Helps free stuck pipe
- Can be used to thin bentonite based muds systems

## TYPICAL PROPERTIES

Physical Appearance	Amber liquid
pH(1% solution)	7.0 – 8.0
Specific Gravity	1.3



## USAGE

Drilling Application / Desired Result	Litres per 1000
Sticky Clays	1 – 2
Bit balling / Mud Rings	½ – 1
To thin a drilling fluid, slowly add CLAY BREAKER to the suction pit over a complete circulation to reduce the fluid viscosity.	

# CLAY-STAR MT

Liquid Clay and Shale Inhibitor

## DESCRIPTION

**CLAY-STAR MT** is designed for use as a permanent clay/shale stabilizer. The product provides excellent shale and clay control and greatly reduces bit balling and mud rings. CLAY-STAR MT is compatible with all drilling fluids, bentonites, synthetic polymers, biopolymers and Potassium Chloride mud systems.

## APPLICATIONS

**CLAY-STAR MT** is used as a permanent solution to reactive or swelling clay particularly when used in conjunction with Potassium Chloride and eliminates the need for detergent or thinning agents. The concentration will vary depending on the reactivity of the clay or shale encountered.

## ADVANTAGES

- Excellent shale and clay inhibition when used as directed
- Soluble in all water-based mud systems
- Mixes easily and immediately controls clay/shale swelling
- Compatible with KCl mud systems

## TYPICAL PROPERTIES

Physical Appearance	Clear liquid
pH (10% Solution)	7.2 – 7.7
Specific Gravity	1.1

## USAGE

Drilling Application / Desired Result	Litres per 1000
In conjunction with KCL	0.2 – 0.5%
To control most Clay and Shale problems	1% by volume

# CORE X

Biodegradable Diamond Drilling Lubricant for Fresh Water

## DESCRIPTION

**CORE X** is a concentrated biodegradable, environmentally friendly oil specifically developed as an extreme pressure lubricant for diamond drilling. When mixed into the makeup water CORE X is designed to instantly disperse and become a micro-emulsion, reducing drill string torque, increased penetration, and significantly extend bit life.

## APPLICATIONS

**CORE X** eliminates rod vibration and rattle in diamond drilling operations by depositing a thin film of grease between the rods and the bore hole wall or casing. CORE X reduces torque on the rod string, minimizes wear on rods and equipment and improves penetration rates and extends bit life.

## ADVANTAGES

- Highly concentrated product and economical
- Biodegradable, environmentally acceptable, and non-hazardous
- Mixes easily and readily disperses in water without agitation
- Increases productivity by increasing penetration rates and reducing bit costs
- Does not stain the core
- Increases rig performance

## TYPICAL PROPERTIES

Physical Appearance	Dark brown liquid
pH(1% solution)	8.0 – 9.0
Solubility	100%



## USAGE

Drilling Application / Desired Result	Litres per 1000
Reduce torque and vibration	2 – 5
Extremely hard and abrasive conditions or in deep directional holes	5 – 10

# DD 5000

High Performance Lubricant

## DESCRIPTION

**DD 5000** is a high performance lubricant designed to work in all water types particularly where poor quality water is a factor. The lubricant is the top performing biodegradable oil on the market and can tolerate highly contaminated water conditions such as high salt content, high pH, high acidity, and water with extremely high levels of calcium and magnesium hardness.

## APPLICATIONS

**DD 5000** has particular applications in deep, deviated diamond drill holes. DD 5000 eliminates rod vibration and rattle in diamond drilling operations by depositing a low-friction film of oil on down hole tooling and the hole wall or casing.

DD 5000 is suitable to be used in all Navigational Motors

## ADVANTAGES

- Biodegradable, environmentally acceptable, and non-hazardous.
- Works in all water types.
- Concentrated product – very economical.
- Mixes easily and disperses without agitation.
- Increases penetration rates and reducing bit costs.
- Does not stain core.
- DD 5000 is suitable to be used in all Navigational Motors

## TYPICAL PROPERTIES

Physical Appearance	Light Brown liquid
pH(1% solution)	8.0 – 9.0
Specific Gravity	0.99



## USAGE

Drilling Application / Desired Result	Litres per 1000
Control torque and vibration	3 – 5
Extremely hard and abrasive conditions or in deep directional holes	5 – 10
For Navigational Motor lubrication rates, consult the Manufacturers user manual.	
<b>DD 5000</b> can be added directly to the sump or injected into the circulating system.	

# DEGREASER

## Biodegradable Degreaser

### DESCRIPTION

**DEGREASER** is a concentrated biodegradable solvent free degreaser. This multipurpose degreaser is built to combat even the toughest grease and grime, leaving no residue after cleaning. The unique formula developed with the latest high performance biodegradable emulsifiers is tough enough to use to degrease engine bays and remove heavy dirt and grime from floors.

### APPLICATIONS

**DEGREASER** is an acceptable replacement for the traditional solvent based degreasers and has the advantage over most solvent types in that it is "quick breaking" which makes it suitable for use through oil / water separation systems.

### ADVANTAGES

- Highly concentrated product and economical
- Biodegradable, environmentally acceptable, and non-hazardous
- Water based
- Solvent free
- Effective in most water types
- Safely removes heavy deposits of grease, oil, exhaust stains from all washable surfaces.

### TYPICAL PROPERTIES

Physical Appearance	Blue liquid
pH(1% solution)	11.0
Solubility	100%



### USAGE

Spray over soiled area, allow **DEGREASER** to sit for 10 – 15 minutes and then rinse off with high pressure water and repeat if necessary.



# DRILLTREX

Formation Stabilising Additive

## DESCRIPTION

**DRILLTREX** is a specially blended formation stabilising additive that reduces the rate of drilling fluid invasion into the drill hole walls while drilling and is especially effective at stabilising brittle, water sensitive formations. DRILLTREX can also be used in conjunction with other inhibitive products to control shales and reactive clays. When drilling difficult shear-zones DRILLTREX reduces high water pressures.

## APPLICATIONS

**DRILLTREX** can be used in all drilling operations as it creates a strong, flexible skin on the walls of the drill hole preventing water invasion into loose, porous zones and protects the formation by creating a physical barrier. DRILLTREX improves core recovery and protects washout of the formation. The protective barrier can also form over shales and reactive clays reducing the occurrences of swelling clays.

## ADVANTAGES

- Improves core recovery.
- Supports drill hole walls by preventing washouts.
- Reduces fluid invasion into formation.
- Minimises water pressure.
- Reduces possibility of reactive clays swelling.
- Soluble in all water types.
- Will mix suitably with lower efficiency mixing equipment.
- Compatible with all Mudex water-based products.

## TYPICAL PROPERTIES

Physical Appearance	Tropical Turquoise to Light Blue liquid
pH	7.0 – 8.0



## USAGE

Add directly into return flow line or pour into an agitated mixing tank.

Drilling Application / Desired Result	Litres per 1000
General usage	1 – 4
Improved core recovery	2 – 5
Shear zones	3 – 6
Broken / Porous ground	8 – 12

# ENVIRO VIS

Viscosifying Natural Polymer

## DESCRIPTION

**ENVIRO VIS** is a cellulose-based natural polymer drilling fluid system that promotes borehole stability, exhibits excellent hole cleaning and cuttings suspension. ENVIRO VIS is easily broken down with hypochlorite oxidizing agents or enzyme breakers.

## APPLICATIONS

**ENVIRO VIS** is designed for use in drilling operations where bentonite is not permitted and a biodegradable fluid is specified. ENVIRO VIS can also be used with bentonite for added fluid loss control and hole cleaning.

## ADVANTAGES

- Easy mixing and effective in low concentrations for controlling fluid loss and building viscosity
- Effective viscosity promotes efficient bore hole cleaning and cutting suspension
- Excellent dispersion and hydration (once pH adjusted to 7.5 – 10)
- Maintains borehole integrity without restricting natural porosity and permeability
- Easily broken following well screen installation with hypochlorite or enzyme breakers.

## TYPICAL PROPERTIES

Physical Appearance	White free-flowing powder
pH(2% solution)	6.5 – 7.5
Specific Gravity	1.2



## USAGE

Drilling Application / Desired Result	Kilograms per 1000
Normal drilling conditions	2 – 5
Unconsolidated / Broken ground	3 – 7

# EZY WATER BLOCK

Dissolvable Water Treatment Block

## DESCRIPTION

**EZY WATER BLOCK's** are a new and innovative way to raise pH and treat hardness out of makeup water. Manufactured in a slowly dissolving solid form and designed to be the easiest and simplest way to condition the water prior to adding drilling fluids. EZY WATER BLOCK's allow products to perform more effectively in poor quality water and are much more effective than products such as soda ash.

## APPLICATIONS

Many drilling fluid products are susceptible to water contamination such as hardness, high salinity, and low pH conditions often found in mine water and bore water. EZY WATER BLOCK's improve the performance of drilling additives and reduces the concentrations needed by neutralizing calcium, magnesium and other heavy minerals in contaminated make up water. EZY WATER BLOCK's can be used in all drilling civil engineering applications. Often pre-conditioning of drilling water is forgotten or overdosed, EZY WATER BLOCK's are designed to maintain a consistent level of treatment and greatly reduce the time taken for drilling crews to spend time at the mixing tank.

## ADVANTAGES

- Effective in low concentrations for controlling water hardness
- Economical, efficient and long lasting.
- Environmentally acceptable
- Ideal for situations where dosage equipment is unavailable or difficult to manage
- Reduces water requirements
- Improves performance of all drilling fluid additives
- Reduces drilling fluid additive consumption
- Increases pH

## TYPICAL PROPERTIES

Physical Appearance	White block
pH(1% solution)	7
Specific Gravity	1.29 – 1.32



## USAGE

Place one EZY WATER BLOCK at the clean drilling water induction point (either at the mixing tank or settling pit) and allow water to flow over the EZY WATER BLOCK before adding drilling fluid additives to the drilling water.

Alternatively, place one EZY WATER BLOCK in the fluid return flow stream per shift as required.

The dosage rate is dependent upon the the flow rate of fluid, volume of treatment fluid and hardness of drilling water. Replace EZY WATER BLOCK as required.



# EZY WATER

## Water Treatment

### DESCRIPTION

**EZY WATER** is a water softening agent similar to but much more effective than Soda Ash. Many drilling fluid products are susceptible to water contamination such as hardness, high salinity, and low pH conditions often found in mine water and bore water. EZY WATER allows these products to perform more effectively in poor quality water.

### APPLICATIONS

**EZY WATER** improves the performance of drilling additives and reduces the concentrations needed by neutralizing calcium, magnesium and other heavy minerals in contaminated make up water. EZY WATER can be used in most drilling applications including diamond drilling, geotechnical, HDD, and civil engineering.

### ADVANTAGES

- Effective in low concentrations for controlling water hardness
- Economical and efficient
- Environmentally acceptable
- Highly soluble powdered product
- Increases pH.

### TYPICAL PROPERTIES

Physical Appearance	White free-flowing powder
pH(1% solution)	10 – 12.0
Specific Gravity	1.15 – 1.25



### USAGE

Drilling Application / Desired Result	Kilograms per 1000
To mix while drilling	0.5 – 2
Sump treatment (pre-mixed in a bucket and tossed over sumps)	5 – 8

# FLASH GROUT

Flash Setting Grout

## DESCRIPTION

**FLASH GROUT** is high strength flash setting cement designed to set hard in approximately 4-5 minutes.

## APPLICATIONS

**FLASH GROUT** can be used when cementing casing, pipe, pre-collars or unstable grounds/formations.

## ADVANTAGES

- Faster setting times than Gypsum cement
- Higher strength compared to Gypsum cement
- Quick setting cement compared to standard GP cement
- Simple and easy to use.

## LIMITATIONS

- Water quality and temperature will affect the setting times.
- Care should be taken when mixing and pumping that the Flash Grout doesn't set too early.
- Not intended to be used as a structural grout or for cementing pressurized bores

## TYPICAL PROPERTIES

Physical Appearance	Grey powder
Specific Gravity	2.4



## USAGE

Add fresh water to the handle line on the pail, mix until a smooth consistency. Makes 18 litres of grout

Note: Initial setting time is 3 – 4 minutes and fully set in 6 – 7 minutes.

# FLOC BLOCKS

Dissolvable solid flocculant

## DESCRIPTION

**FLOC BLOCKS** is a flocculant additive in a slowly dissolving solid form designed to settle very fine to colloidal materials and low gravity solid particles from drilling fluids. FLOC BLOCKS neutralize the surface charges on the suspended particles causing them to aggregate and stick together and allowing them to settle out of the drilling fluid.

## APPLICATIONS

**FLOC BLOCKS** are used to clarify drilling fluids, reduce mud weight and stop the buildup of excessive colloidal particles in the drilling fluid. FLOC BLOCKS are considerably more effective than other dissolvable flocculants available on the market.

## ADVANTAGES

- Easy to use
- Economical
- Ideal for situations where dosage equipment is unavailable or difficult to manage
- Reduces water requirements

## TYPICAL PROPERTIES

Physical Appearance	White Block
pH	6 - 7
Specific Gravity	1



## USAGE

Place FLOC BLOCKS in the fluid return flow stream 3 – 5 metres before the settling pit.

The dosage rate is dependant upon the the flow rate of fluid, volume of treatment fluid and cuttings requiring treatment.

Place one FLOC BLOCK in the fluid return flow stream per shift as required.

# FLOC X

Liquid Flocculant

## DESCRIPTION

**FLOC X** is a general purpose cationic liquid flocculant additive designed to settle very fine to colloidal materials and low gravity solid particles from drilling fluids. FLOC X neutralizes the surface charges on the suspended particles causing them to aggregate and stick together and allowing them to settle out of the drilling fluid.

## APPLICATIONS

**FLOC X** is used to clarify drilling fluids, reduce mud weight and stop the buildup of excessive colloidal particles in the drilling fluid.

## ADVANTAGES

- Concentrated and very economical
- Mixes easily and immediately
- 100% soluble in all water-based mud systems
- Effective at low concentrations
- Compatible with most Mudex products.

## TYPICAL PROPERTIES

Physical Appearance	Pale brown liquid
pH(10% Solution)	2.3 – 2.8
Specific Gravity	1.03



## USAGE

For best result ensure the fluid to be treated has pH raised to 8.0 - 9.0

Slowly trickle feed the FLOC X into the flow line prior to the settling pit at 50 – 100 ml per 1000 litres

# FOAM X

Drilling Foam for Fresh Water

## DESCRIPTION

**FOAM X** is a biodegradable cost effective foaming agent that can foam in freshwater conditions. FOAM X is completely biodegradable and will not contaminate streams or ground water.

## APPLICATIONS

**FOAM X** is used as a foaming agent in air drilling operations. Depending on the concentration used and the rate of injection, it can be used for dust suppression, mist, foam, and stiff foam production. FOAM X increases the ability of the air stream to carry cuttings and lowers air volume requirements. The addition of POLY VIS LIQUID, POLY VIS 2000, or VIS TROL will create a stiff foam for increased cuttings carrying capacity and improved hole stability in large diameter holes and friable formations. FOAM X reduces the sticking tendencies of wet clays and results in decreased incidences of mud rings and hole pack offs.

## ADVANTAGES

- Provides stable foam at low concentrations in fresh water
- Biodegradable and non-dangerous
- Reduces compressor requirements and enables deeper hole depths
- Improves hole cleaning and increases penetration rates
- Compatible with Mudex's BIO HAMMER OIL
- Reduces loss of air to cavity zones
- Acts as an effective dust suppressant while drilling.

## TYPICAL PROPERTIES

Physical Appearance	Green liquid
pH	7-9
Solubility	100%



## USAGE

Drilling Application / Desired Result	Litres per 1000
Dust Suppression	1 – 2
Mist Drilling	2 – 5
Normal Foam Drilling	5 – 10
Stiff Foam – Mix a base fluid containing 1 – 5 litres of POLY VIS LIQUID plus 10 – 15 litres per 1000 litres. Inject into the airstream to produce a stable, stiff foam.	



# FOAM X PLUS

High Performance Drilling Foam for Fresh Water

## DESCRIPTION

**FOAM X PLUS** is a biodegradable foaming agent, designed with superior height and half-life it can outperform most other foams in fresh water. FOAM X PLUS is completely biodegradable and will not contaminate streams or ground water.

## APPLICATIONS

**FOAM X PLUS** is used as a foaming agent in air drilling operations. Depending on the concentration used and the rate of injection, it can be used for dust suppression, mist, foam, and stiff foam production. FOAM X PLUS increases the ability of the air stream to carry cuttings and lowers air volume requirements. The addition of POLY VIS LIQUID, POLY VIS 2000, or VIS TROL will create a stiff foam for increased cuttings carrying capacity and improved hole stability in large diameter holes and friable formations. FOAM X PLUS reduces the sticking tendencies of wet clays and results in decreased incidences of mud rings and hole pack offs.

## ADVANTAGES

- Provides stable foam at low concentrations
- Biodegradable and non-dangerous
- Reduces compressor requirements and enables deeper hole depths
- Improves hole cleaning and increases penetration rates
- Effective in fresh and extremely poor quality water
- Compatible with Mudex's BIO HAMMER OIL
- Reduces loss of air to cavity zones
- Acts as an effective dust suppressant while drilling.

## TYPICAL PROPERTIES

Physical Appearance	Fluro green liquid
pH	7-9
Solubility	100%



## USAGE

Drilling Application / Desired Result	Litres per 1000
Dust Suppression	1 – 2
Mist Drilling	2 – 5
Normal Foam Drilling	5 – 10
Stiff Foam – Mix a base fluid containing 1 – 5 litres of POLY VIS LIQUID plus 10 – 15 litres per 1000 litres. Inject into the airstream to produce a stable, stiff foam.	

# FOAM X ULTRA

High Performance Drilling Foam for all Water types.

## DESCRIPTION

**FOAM X ULTRA** is a biodegradable foaming agent that has the ability to foam in fresh, brackish, salt and hyper saline water. FOAM X ULTRA is completely biodegradable and will not contaminate streams or ground water.

## APPLICATIONS

**FOAM X ULTRA** is used as a foaming agent in air drilling operations. Depending on the concentration used and the rate of injection, it can be used for dust suppression, mist, foam, and stiff foam production. FOAM X ULTRA increases the ability of the air stream to carry cuttings and lowers air volume requirements. The addition of POLY VIS LIQUID, POLY VIS 2000, or VIS TROL will create a stiff foam for increased cuttings carrying capacity and improved hole stability in large diameter holes and friable formations. FOAM X ULTRA reduces the sticking tendencies of wet clays and results in decreased incidences of mud rings and hole pack offs.

## ADVANTAGES

- Provides stable foam at low concentrations
- Biodegradable and non-dangerous
- Reduces compressor requirements and enables deeper hole depths
- Improves hole cleaning and increases penetration rates
- Effective in fresh and extremely poor quality water
- Compatible with Mudex's BIO HAMMER OIL
- Reduces loss of air to cavity zones
- Acts as an effective dust suppressant while drilling.

## TYPICAL PROPERTIES

Physical Appearance	Brown liquid
pH	7-9
Solubility	100%



## USAGE

Drilling Application / Desired Result	Litres per 1000
Dust Suppression	1 – 2
Mist Drilling	2 – 5
Normal Foam Drilling	5 – 10
Stiff Foam – Mix a base fluid containing 1 – 5 litres of POLY VIS LIQUID plus 10 – 15 litres per 1000 litres. Inject into the airstream to produce a stable, stiff foam.	

# STARGEL PREMIUM

High Yield Wyoming Bentonite

## DESCRIPTION

**STARGEL PREMIUM** viscosifier is a premium ultra-fine grind bentonite blended with special extenders, producing a product that will yield more than twice as much viscosity as API Wyoming bentonite. STARGEL PREMIUM is an easily mixed bentonite for freshwater and extended bentonite systems.

## APPLICATIONS

**STARGEL PREMIUM** is used 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. Typical uses are in: Potable-water wells, Mineral exploration, Horizontal directional drilling Construction and Gel-foam air drilling operations.

## ADVANTAGES

- 93% passing through 200 mesh grind specification ensures rapid hydration with limited mixing equipment
- Yields more quickly than API-standard bentonite
- Non-toxic and proven suitable for use in drilling potable water wells
- Increased penetration rates due to lower solids content than standard API bentonite systems
- Transportation and storage costs are reduced due to lower treatment requirements as compared to API bentonite
- Non-toxic and environmentally acceptable
- Makes an economical and simple drilling mud
- Assists to reduce seepage losses in porous formations.

## TYPICAL PROPERTIES

Physical Appearance	Light Tan, grey green free-flowing powder
Specific Gravity	2.3 – 2.5
Approximate yield	240 bbl / ton

## USAGE

Drilling Application / Desired Result	Kilograms per 1000
Normal drilling conditions	15 – 30
Gravel or caving formations	35 – 40
Regular freshwater mud	5 – 15
To control seepage losses	35 – 50



# GEL X 13A GROUT

API Bentonite

## DESCRIPTION

**GEL X 13A GROUT** is a 200 mesh, 90 bbl yield Australian sodium bentonite for fresh water drilling which complies with API 13A Section 9, Specifications for Drilling Fluid Materials. GEL X 13A GROUT functions as a viscosifier and filtrate reducer.

## APPLICATIONS

**GEL X 13A GROUT** is used in all drilling applications that use a fresh water drilling fluid. GEL X 13A GROUT can also be used as a seal for earthen structures, slurry trenching, tunnel boring, foundation drilling and as the bentonite component for Cement / Bentonite slurries.

## ADVANTAGES

- Non-toxic and environmentally acceptable
- Mixes quickly and easily
- Reduces fluid loss into the formation
- Stabilises the borehole
- Complies with API 13A section 9
- Is appropriate to be used in Cement / Bentonite slurries

## TYPICAL PROPERTIES

Physical Appearance	Tan powder
Specific Gravity	2.3 – 2.5



## USAGE

Drilling Application / Desired Result	kgs per 1000
Normal drilling conditions	15 - 30
Gravel or caving formations	35 - 40
Regular fresh water mud	5 – 15
Control seepage loss	35 – 50

# GEL X 180

High Yield Australian Sodium Bentonite

## DESCRIPTION

**GEL X 180** is a high yielding, drilling grade bentonite made from the highest grade Australia sodium bentonite blended with special extenders. GEL X 180 mixes easily for fresh water and extended bentonite systems.

## APPLICATIONS

**GEL X 180** is used to 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. Typical uses are in: Potable-water wells, Mineral exploration, Horizontal directional drilling construction and Gel-foam air drilling operations.

## ADVANTAGES

- Non-toxic and environmentally acceptable
- Mixes quickly and easily
- Reduces fluid loss into the formation
- Stabilises the borehole
- Helps prevent loss circulation
- Highly concentrated for maximum yield

## TYPICAL PROPERTIES

Physical Appearance	Tan powder
Specific Gravity	2.3 – 2.5



## USAGE

Drilling Application / Desired Result	kgs per 1000
Normal drilling conditions	15 - 30
Gravel or caving formations	35 - 40
Regular fresh water mud	5 – 15
Control seepage loss	40 - 50

# GEL X SW

Bentonite drilling system for salt water

## DESCRIPTION

**GEL X SW** is a proprietary blended bentonite designed as a single sack product specifically engineered for use with salt or hyper saline water. GEL X SW provides viscosity and filtration control which can eliminate the need to add Trol or PHPA polymers to the mud system in all water types.

## APPLICATIONS

**GEL X SW** is used as a one sack drilling system to rapidly build viscosity and low filtration rates for efficient core recovery, hole stability, and hole cleaning in poorly consolidated and caving ground types where poor quality water is used.

## ADVANTAGES

- One sack mud system
- Reduces the number of products on site
- Simple but effective mud program for crews with limited drilling fluid experience
- Provides superior yield and filtration control
- Eliminates the need for VIS TROL and POLY VIS HV
- Non-toxic and environmentally acceptable
- Works in all water types

## TYPICAL PROPERTIES

Physical Appearance	Light Tan, grey green free-flowing powder
Specific Gravity	2.3 – 2.5



## USAGE

Drilling Application / Desired Result	kgs per 1000
Normal drilling conditions	10
Gravel or caving formations	20

# GEO BOND 2.0

Specialty Core Recovery Polymer

## DESCRIPTION

**GEO BOND 2.0** is a revolutionary polymer system designed to maximise core recovery and performance in diamond drilling operations. GEO BOND 2.0 stabilizes unconsolidated formations and protects the core from wash out by forming a polymeric lattice over the drilled surfaces. It coats the surface of the sample as it is being drilled with a protective polymer web and builds a tough and impermeable wall cake that is far superior to using bentonite. GEO BOND 2.0 helps to preserve the core sample in its natural state offering higher quality resource assessment.

GEO BOND 2.0 has unique micro particle polymers that create a physical barrier and greatly reduce the filtrate that can travel into the formation. These polymers help block fractures in the core and bore hole wall, keeping the core in a pristine state and increased bore hole stability

## APPLICATIONS

**GEO BOND 2.0** is a one sack drilling fluid developed specifically for the diamond drilling market to solve core recovery issues, stabilize loose and fractured formations and maintain bore hole and core integrity.

To date the GEO BOND 2.0 has been run on several sites around Australia and South East Asia. Each of these sites it has been run as a replacement for a traditional Bentonite and PAC based drilling fluid and on each occasion the GEO BOND 2.0 has outperformed the Gel and PAC based programs with both core recovery and hole stability.

## ADVANTAGES

- One sack drilling fluid and economical to use
- Build an extremely effective wall cake
- Increases core recovery and core quality
- Improves hole stability
- Easily mixes and works in most water types
- Enhances the removal of drill solids
- Non-hazardous and environmentally acceptable.

## LIMITATIONS

- GEO BOND 2.0 performance is reduced with poor water quality.
- It is susceptible to shear degradation with aggressive pumping.

## USAGE

Drilling Application / Desired Result	kgs per 1000
As a complete drilling fluid	½ - 1
Improved core recovery and reduced torque & vibration	1 – 2



# GEO BOND LIQUID

Liquified Specialty Core Recovery Polymer

## DESCRIPTION

**GEO BOND LIQUID** is a liquified version of the proprietary Mudex product GEO BOND 2.0. It is a revolutionary polymer system designed to maximise core recovery and performance in diamond drilling operations. GEO BOND LIQUID stabilizes unconsolidated formations and protects the core from wash out by forming a polymeric lattice over the drilled surfaces. It coats the surface of the sample as it is being drilled with a protective polymer web and builds a tough and impermeable wall cake that is far superior to using bentonite. GEO BOND LIQUID helps to preserve the core sample in its natural state offering higher quality resource assessment.

**GEO BOND LIQUID** has unique micro particle polymers that create a physical barrier and greatly reduce the filtrate that can travel into the formation. These polymers help block fractures in the core and bore hole wall, keeping the core in a pristine state and increased bore hole stability.

## APPLICATIONS

**GEO BOND LIQUID** is a one drum drilling fluid developed specifically to bring all the advantages GEO BOND 2.0 will bring to a mud system and recommended for use where mixing systems are inefficient or limited due to site restrictions.

## ADVANTAGES

- One drum drilling fluid and economical to use.
- Liquified product mixes and yields easily.
- Builds an extremely effective wall cake.
- Increases core recovery and core quality.
- Improves hole stability.
- Easily mixes and works in most water types.
- Enhances the removal of drill solids.

## LIMITATIONS

- GEO BOND LIQUID performance is reduced with poor water quality.
- It is susceptible to shear degradation with aggressive or extended pumping.



## USAGE

Drilling Application / Desired Result	litres per 1000
Complete drilling fluid	1.5 – 3.0
For improved core recovery & reduced torque & vibration	2.5 – 4.0



# GROUND STABILIZER RC

Liquid Ground Stabilizer for RC Drilling

## DESCRIPTION

**GROUND STABILIZER RC** is a blend of high-quality adhesives that form a hard coating on the formation walls during the drilling process.

## APPLICATIONS

**GROUND STABILIZER RC** is used in RC Drilling operations to control loose and caving formations whilst drilling. Added directly down the rods or injected into the airstream the product is blown into the annulus and forms a film on the borehole wall.

## ADVANTAGES

- Makes it possible to drill unconsolidated formations
- Reduces the need to re-drill unstable zones
- Environmentally friendly
- Easy to use.

## TYPICAL PROPERTIES

Physical Appearance	White Liquid
SG	1.06

## USAGE

For general usage, mix 1:1 ratio with water.

Dosage will depend on hole conditions, 2 litres will generally treat 3 metres of 5" hole.



# GROUT X

Gypsum Cement

## DESCRIPTION

**GROUT X** is high strength gypsum cement designed to set hard in approximately 15 minutes.

## APPLICATIONS

**GROUT X** can be used when cementing casing, pipe, pre-collars or unstable grounds and formations. It has applications for plugging lost circulation zones or used as a cement plug prior to wedging off.

## ADVANTAGES

- Quick setting cement compared to standard GP cement
- Simple and easy to use

## LIMITATIONS

- Water quality and temperature will affect the setting times.
- Care should be taken when mixing and pumping that the Grout X doesn't set too early.
- Not intended to be used as a structural grout or for cementing pressurised bores.

## TYPICAL PROPERTIES

Physical Appearance	White powder
Specific Gravity	2.4



## USAGE

Mix at a general ratio of 20kg GROUT X with 13 litres of potable water, mix until a smooth consistency.

More water can be added for a thinner slurry and longer setting times, add more GROUT X for a thicker slurry and faster setting times.

# KLA BORE

Specialty Drilling Polymer

## DESCRIPTION

**KLA BORE** is a revolutionary polymer system designed to maximise performance in drilling operations when dealing with clays. KLA BORE stabilizes and inhibits the formations and protects them by forming a polymeric lattice over the drilled surfaces. It coats the surface of the bore cuttings as it is being drilled with a protective polymer web.

## APPLICATIONS

**KLA BORE** is a one sack drilling fluid developed specifically for drilling through reactive clays and shales. It will build rapid viscosity for excellent hole cleaning while breaking the clay down and allowing it to become a flowable slurry

## ADVANTAGES

- One sack drilling fluid and economical to use
- Improves hole stability
- Excellent inhibition
- Easily mixes and works in most water types
- Enhances the removal of drill solids
- Non-hazardous and environmentally acceptable.

## TYPICAL PROPERTIES

Physical Appearance	White granular powder
pH(1% solution)	7.7
Activity	>90%



## USAGE

Drilling Application / Desired Result	kgs per 1000
As a complete drilling fluid	0.5 – 1.0
For improved core recovery & reduced torque & vibration	1.0 – 2.0

# LIQUID VIS TROL

Viscosifying Cellulose Polymer in a Biodegradable Vegetable Oil

## DESCRIPTION

**LIQUID VIS TROL** is a high-quality polyanionic cellulose, water-soluble polymer suspended in a highly refined biodegradable vegetable oil designed to control fluid loss and increase viscosity in water-base muds.

Note: Mudex are also able to manufacture in the same formulation

- **LIQUID VIS PAC L**
- **LIQUID VIS PAC R**
- **LIQUID NIF** (Non Invasive Fluid for CBM and Waterwell applications)

## APPLICATIONS

**LIQUID VIS TROL** controls fluid loss and provides viscosity in freshwater and seawater drilling fluid system and forms a thin, resilient, low-permeability filter cake minimizing the potential for formation sloughing and the invasion of filtrate and mud solids into permeable formations.

## ADVANTAGES

- Mixes easily with minimal agitation
- Environmentally friendly and mineral oil free
- Easy mixing and effective in low concentrations for controlling fluid loss and building viscosity
- Encapsulates shale particles to inhibit swelling and dispersion
- Resists bacterial attack, requiring no biocides or preservatives
- Functions over a wide range of salinity, hardness and pH levels
- Applicable in all water-based fluids, ranging from low solids, non-dispersed polymer systems to high-density dispersed systems

## TYPICAL PROPERTIES

Physical Appearance	Beige liquid
pH(1% solution)	6.5 – 8.0
Specific Gravity	1.5 – 1.6

## USAGE

Drilling Application / Desired Result	Kilograms per 1000
To reduce torque and improve core recovery	2 – 4
To stabilize unconsolidated formations, clays etc	3 – 6
To improve the properties of a GEL X mud	1 – 3

# LRG

Liquid Rod Grease

## DESCRIPTION

**LRG** is a high performance diamond drilling liquid grease, formulated for quick and easy application by pouring it down the rods allowing it to grease from the bottom of the hole to the surface. LRG is poured into the rod string when the inner tube is lowered again after core recovery, slowly washing LRG down the inside of the rods and forcing it into the annulus to do its work as rod grease. Used on its own or in conjunction with rod grease and designed to create an extremely low torque environment by adhering to both the formation and the outside of the rods.

## APPLICATIONS

**LRG** is proven in some of the deepest Diamond drill holes and is biodegradable, non-toxic, and an environmental friendly product. LRG reduces torque and frictional drag on the drill rods.

## ADVANTAGES

- Extends rod life and reduces maintenance costs
- Proprietary formulation
- Ease of application
- Biodegradable and environmentally safe
- Minimizes wear and friction on drill rods
- Increases bit life and production
- Stable at high pressure and temperatures
- Improves core recovery.

## TYPICAL PROPERTIES

Physical Appearance	Brown liquid grease
pH	N/A



## USAGE

Drilling Application / Desired Result	litres per 1000
Apply a generous amount to smear on the outside of the rods by pouring into open rod string after each tube pull	
0 – 500 metres	1 – 2
500 – 1,500 metres	2 – 4
1,500 metres and deeper	4 – 5



# MAXIDRILL HV

Blended High-Performance Polymer and Biodegradable Lubricant

## DESCRIPTION

**MAXIDRILL HV** is a high viscosity, liquid drilling fluid additive specifically developed as a one drum drilling lubricant and viscosifier. The high-performance synthetic polymer is blended with an ecologically friendly lubricant and shale control additive for water-based mud systems and is developed for use in freshwater and saltwater based drilling fluids. MAXIDRILL HV is an excellent selection when demands on logistics for remote sites or space restrictions in an underground environment prevents easily delivering or storing product.

## APPLICATIONS

**MAXIDRILL HV** is a one drum liquid product that requires no extra mixing of polymers, improves lubricity results in torque and drag reduction allowing faster, deeper and highly deviated drilling. MAXIDRILL HV viscosifies rapidly and exhibits excellent hole-cleaning characteristics under low shear rates. It provides easy solids deposition in settling pits when used in core drilling. Used alone or with KCL or substitutes it will stabilise active shales by encapsulating the drilled cuttings and inhibiting formation swelling.

## ADVANTAGES

- Can be used in diamond, horizontal directional drilling, geotechnical, and rotary drilling applications
- Requires small amounts of product for high viscosity yields.
- Liquid product which mixes easily and readily disperses in water without agitation
- Two-in-one concentrated product, acts as lubricant, hole cleaning viscosifier and shale stabiliser
- Biodegradable, ecologically friendly, and non-hazardous
- Increases productivity by increasing penetration rates and reducing bit costs
- Can act as a flocculant

## TYPICAL PROPERTIES

Physical Appearance	Light Ivory to Ivory Liquid
pH (1% Solution)	7.0 – 8.0



## USAGE

Drilling Application / Desired Result	litres per 1000
Complete drilling fluid	0.5 – 1.0
For improved core recovery and reduced torque and vibration	0.2 – 0.5

# MAXIDRILL

Blended High-Performance Polymer and Biodegradable Lubricant

## DESCRIPTION

**MAXIDRILL** is a liquid drilling fluid additive specifically developed as a one drum drilling lubricant and viscosifier. The high-performance synthetic polymer is blended with an ecologically friendly lubricant and shale control additive for water-based mud systems and is developed for use in freshwater and saltwater based drilling fluids.

## APPLICATIONS

**MAXIDRILL** is a one drum liquid product that requires no extra mixing of polymers, improves lubricity results in torque and drag reduction allowing faster, deeper and highly deviated drilling. MAXIDRILL viscosifies rapidly and exhibits excellent hole-cleaning characteristics under low shear rates. It provides easy solids deposition in settling pits when used in core drilling. Used alone or with KCL or substitutes it will stabilize active shales by encapsulating the drilled cuttings and inhibiting formation swelling.

## ADVANTAGES

- Can be used in diamond, horizontal directional drilling, geotechnical, and rotary drilling applications
- Effective in all water types.
- Liquid product which mixes easily and readily disperses in water without agitation
- Two-in-one concentrated product, acts as lubricant, hole cleaning viscosifier and shale stabiliser
- Biodegradable, ecologically friendly, and non-hazardous
- Increases productivity by increasing penetration rates and reducing bit costs
- Can act as a flocculant

## TYPICAL PROPERTIES

Physical Appearance	Light Ivory to Ivory Liquid
pH (1% Solution)	7.0 – 8.0



## USAGE

Drilling Application / Desired Result	litres per 1000
Complete drilling fluid	1.0 – 3.0
For improved core recovery & reduced torque & vibration	0.5 – 1.0

# PENETREX (ALL GRADES)

High Performance Biodegradable Lubricant

## DESCRIPTION

**PENETREX** is a concentrated biodegradable, extreme pressure cutting oil specifically developed as a lubricant for diamond drilling. When mixed into the makeup water **PENETREX** is designed to instantly disperse and form a micro-emulsion. Its primary function is to increase penetration, reduce drill string torque and significantly extend bit life. Can be supplied in 2 different grades depending on the quality of the make-up water or formation and ground water contaminants encountered.

- **PENETREX** is suitable for fresh to brackish water supplies with low to medium hardness.
- **PENETREX SW** best suited for salty to hyper-saline water sources with aggressive hardness levels.

## APPLICATIONS

**PENETREX** eliminates rod vibration and rattle in diamond drilling operations by depositing a thin film of grease between the rods and the bore hole wall or casing. **PENETREX** has a secondary function to help prevent clay and talc's adhering to bits and the BHA.

## ADVANTAGES

- Highly concentrated product and economical
- Biodegradable, environmentally acceptable, and non-hazardous
- Mixes easily and readily disperses in water without agitation
- Supplied depending on specific site water or formation requirements
- Increases productivity by increasing penetration rates and reducing bit costs
- Does not stain the core
- Increases rig performance.

## TYPICAL PROPERTIES

Physical Appearance	
<b>PENETREX</b>	Fluro yellow
pH(1% solution)	8.5 – 9.5
Solubility	100%

Physical Appearance	
<b>PENETREX SW</b>	Amber Liquid
pH(1% solution)	8.5 – 9.5
Solubility	100%



## USAGE

Drilling Application / Desired Result	litres per 1000
To reduce torque and increase penetration	1.0 – 3.0
For extremely hard abrasive ground	0.5 – 1.0

# POLY TROL

A Blend of High Viscosity PAC & Synthetic Polymers

## DESCRIPTION

**POLY TROL** is a specialized blend of high molecular-weight PAC & Synthetic polymers designed for cuttings encapsulation, shale stabilization and filtrate control. Developed as a one drum product for all types of drilling. **POLY TROL** acts as an Encapsulater, Viscosifier, friction and filtrate reducer.

## APPLICATIONS

**POLY TROL** may be used in clear-water, solids-free drilling fluids. **POLY TROL** enhances solids removal by flocculating low-gravity solids and increasing Viscosity while providing cuttings encapsulation and improved wellbore stability.

**POLY TROL** controls fluid loss and provides viscosity in freshwater, seawater, KCl and salt muds forming a thin, resilient, low-permeability filter cake. **POLY TROL** minimizes the potential for differential sticking and the invasion of filtrate/mud solids into permeable formations.

## ADVANTAGES

- Simple and easy one drum drilling fluid
- Effective in low concentrations for controlling fluid loss and building viscosity
- Resists bacterial attack, requiring no biocides or preservatives
- Excellent cuttings encapsulation that limits cuttings dispersion
- Improved shale stabilization
- Coats and lubricates solids to aid in preventing balling on the bit, stabilizers and BHA
- Enhances the removal of drill solid

## TYPICAL PROPERTIES

Physical Appearance	Tan granular powder
pH(1% solution)	7.7
Specific Gravity	1.2-1.5



## USAGE

Drilling Application / Desired Result	kilograms per 1000
Complete drilling fluid	1.0 – 3.0
Improved core recovery & reduced torque and vibration	0.5 – 2.0
To improve the properties of a bentonite mud	0.5 – 0.8
Complete fluid for small diameter water bores	1.0 – 2.0

# POLY VIS 2000

High Performance Liquid Polymer

## DESCRIPTION

**POLY VIS 2000** is a 50% active synthetic polymer developed for use in freshwater and saltwater base drilling fluids. POLY VIS 2000 is a unique dispersion grade liquid PHPA that resists freeze / thaw degradation and phase separation.

## APPLICATIONS

**POLY VIS 2000** viscosifies rapidly and exhibits excellent hole-cleaning characteristics under low shear rates. It provides easy solids deposition in settling pits when used in core drilling. Used alone or with KCL or substitutes it will stabilize active shales by encapsulating the drilled cuttings and inhibiting formation swelling. POLY VIS 2000 creates thicker, stronger drill foams improving the cuttings-carrying capacity of the fluid and resisting water inflows.

## ADVANTAGES

- Concentrated polymer content with longer shelf life than other liquid polymers
- Stabilizes clay, shale and mudstone formations
- Compatible with most drilling fluids additives
- Excellent all-round lubricant
- Can be used with foam to help stabilize loose formations and improve cuttings carrying
- Can act as a flocculant.

## TYPICAL PROPERTIES

Physical Appearance	White Liquid dispersion
pH(1% solution)	6.5 – 7.5
Specific gravity	1.06 – 1.08



## USAGE

Drilling Application / Desired Result	Litres per 1000
Diamond drilling additive	0.5 – 0.75
Complete diamond drilling fluid	0.3 – 2.0
Improved diamond drilling core recovery	1.0 – 2.5
Bentonite supplement	0.2 – 3.0
Drilling foam supplement	0.2 – 1.0



# POLY VIS DRY

Dispersible Rapid Yield High Viscosity Polymer

## DESCRIPTION

**POLY VIS DRY** is a dispersible rapid yielding high molecular-weight Polymer for cuttings encapsulation and shale stabilization developed for use in low solids to weighted muds in fresh and salt make-up water. **POLY VIS DRY** acts as a Viscosifier, friction reducer, and flocculant.

## APPLICATIONS

Designed as low-cost alternative to standard polymers where longevity is not required such as the underground drilling environment where polymers have a single circulation use.

**POLY VIS DRY** flash hydrates and will build a rapid viscosity and is highly dispersible meaning it requires minimal agitation.

**Viscous Sweeps** **POLY VIS DRY** sweeps are effective for periodic hole cleaning to help clear accumulated cuttings and maintain a clean hole.

## ADVANTAGES

- Low cost
- Dispersible
- Rapid yielding
- Excellent cuttings encapsulation that limits cuttings dispersion
- Improved shale stabilization
- Coats and lubricates solids to aid in preventing balling on the bit, stabilizers and BHA

## LIMITATIONS

- Will shear degrade faster
- Will not maintain a flat rheology profile over time

## TYPICAL PROPERTIES

Physical Appearance	Tan granular powder
pH(1% solution)	7.7
Specific Gravity	1.2-1.5



## USAGE

Drilling Application / Desired Result	kgs per 1000
Complete drilling fluid	1.0 – 2.5
Improved core recovery & reduced torque and vibration	0.8 – 1.5
To improve the properties of a bentonite mud	0.5 – 0.8
Complete fluid for small diameter water bores	1.0 – 1.5

# POLY VIS HV

High Viscosity Polymer

## DESCRIPTION

**POLY VIS HV** is a high molecular-weight Polymer designed for cuttings encapsulation and shale stabilization developed for use in low solids to weighted muds in fresh and salt make-up water. POLY VIS HV acts as a Viscosifier, friction reducer, and flocculant.

## APPLICATIONS

**Clear-water fluids.** POLY VIS HV may be used in clear-water, solids-free drilling fluids. POLY VIS HV enhances solids removal by flocculating low-gravity solids and increasing Viscosity while providing cuttings encapsulation and improved wellbore stability.

**Low-Solids, Non-Dispersed (LSND) fluids** In reduced-bentonite systems, POLY VIS HV extends bentonite to increase Viscosity, flocculates drill solids for more efficient removal and encapsulates cuttings while improving wellbore stability.

**Weighted fluids** POLY VIS HV can be used in weighted fluids for cuttings encapsulation, improved wellbore stability, Viscosity and improved filter cake integrity.

**Viscous Sweeps** POLY VIS HV sweeps are effective for periodic hole cleaning to help clear accumulated cuttings and maintain a clean hole.

## ADVANTAGES

- Excellent cuttings encapsulation that limits cuttings dispersion
- Improved shale stabilization
- Coats and lubricates solids to aid in preventing balling on the bit, stabilizers and BHA
- Enhances the removal of drill solid

## TYPICAL PROPERTIES

Physical Appearance	White granular powder
pH(1% solution)	7.7
Activity	>90%
Nature of Charge	Anionic

## USAGE

Drilling Application / Desired Result	Kilograms per 1000
<b>Diamond Drilling Applications</b>	
Complete diamond drilling fluid	1.0 – 2.5
For improved core recovery & reduced torque & vibration	0.8 – 1.5
<b>Water Bore Applications</b>	
Bentonite supplement	0.5 – 0.8
As a complete fluid in smaller diameter bores	1.0 – 1.5

# POLY VIS LIQUID

Liquid Polymer

## DESCRIPTION

**POLY VIS LIQUID** is a high-molecular-weight, anionic liquid polymer designed to provide cuttings encapsulation and shale stabilization, and also acting as a viscosifier, friction reducer and flocculent. POLY VIS LIQUID can be used in both fresh and saline make up water.

## APPLICATIONS

**POLY VIS LIQUID** polymer systems provide excellent cuttings encapsulation and improved wellbore stability in fresh, weighted, KCl or NaCl enhanced fluids.

**Clear-water fluids.** POLY VIS LIQUID may be used in clear-water, solids-free drilling fluids. It increases viscosity and removes solids by flocculation.

**Low-Solids, Non-Dispersed (LSND).** In reduced-bentonite fluids, POLY VIS LIQUID acts as a bentonite extender to increase viscosity and flocculates drill solids for more efficient removal.

**POLY VIS LIQUID** viscous sweeps are effective for periodic hole cleaning.

## ADVANTAGES

- Concentrated polymer content with longer shelf life than other liquid polymers
- Provides excellent cuttings encapsulation and limits cuttings dispersion
- Provides improved shale stabilization
- Enhances the removal of drill solids
- Mixes and yields easily
- Aids in preventing balling on the bit, stabilizers and bottom-hole assembly by coating and lubricating solids
- Can be used with foam to help stabilize loose formations and improve cuttings carrying.

## TYPICAL PROPERTIES

Physical Appearance	Cream colored liquid
pH(1% solution)	8.9 – 9.0
Specific gravity	1.07- 1.10



## USAGE

Drilling Application / Desired Result	Litres per 1000
Diamond drilling additive	0.5 – 0.75
Complete diamond drilling fluid	0.3 – 2
Improved diamond drilling core recovery	1 – 2.5
Bentonite supplement	0.2 – 3
Drilling foam supplement	0.2 – 1

# POLY VIS LV

Low Viscosity Polymer

## DESCRIPTION

**POLY VIS LV** polymer is a low-molecular-weight, medium-charge polyacrylamide designed to provide cuttings encapsulation and clay-dispersion inhibition for use in both fresh and salt water. **POLY VIS LV** improves fluid loss control without adding to fluid viscosity and extends GEL X 180 / STAR GEL PREMIUM to produce an inhibitive drilling-fluid system without affecting mud rheology.

## APPLICATIONS

**POLY VIS LV** provides excellent cuttings encapsulation by forming a protective film that prevents cuttings from sticking to each other or on the shaker screens. The mixing process requires less shear than polymers with higher molecular weights and the resulting fluid will pass through shaker screens without blinding. **POLY VIS LV** is also effective in seawater and salt-based fluids.

## ADVANTAGES

- Provides excellent shale and clay cuttings encapsulation and limits cuttings dispersion
- Minimal contribution to the viscosity of the system and will not blind shaker screens
- For use in seawater, KCl or freshwater systems
- Will not negatively affect rheological profiles.

## TYPICAL PROPERTIES

Physical Appearance	White granular powder
pH(0.5% solution)	6.0 - 8.0
Specific Gravity	0.7
Solubility in Water	100%

## USAGE

Drilling Application / Desired Result	Kilograms per 1000
Normal drilling	2.0 – 4.5
Bentonite free drilling fluid	0.5 – 2.0
Added to a bentonite mud for formation clay inhibition	0.25 – 1.5
Complete fluid for small diameter water bores	1.0 – 1.5

# POTASSIUM CHLORIDE (KCL)

Clay inhibitor and weighting agent

## DESCRIPTION

**POTASSIUM CHLORIDE (KCL)** is a soluble salt that is also a very efficient shale and clay stabilizer.

## APPLICATIONS

**POTASSIUM CHLORIDE** can be added directly to a drilling fluid system to enhance its inhibitive properties and prevent clays from reacting with a water based drilling fluid. It can also be used as a weighting agent ranging in densities from 1.005 SG (8.4ppg) to 1.16 SG (9.7ppg)

Polymers such as the POLY VIS, VIS PAC and VIS TROL range can all be used with POTASSIUM CHLORIDE. It is recommended the polymers be hydrated prior to adding POTASSIUM CHLORIDE

## ADVANTAGES

- Inexpensive and readily available
- Stabilises problematic clay and shales
- Easy to mix
- Compatible with most drilling fluids
- Provides inhibition and additional weight

## TYPICAL PROPERTIES

Physical Appearance	Free flowing white salt
pH(1% solution)	7.0 – 8.5

## USAGE

Drilling Application / Desired Result	kilograms per 1000
Clay & Shale inhibition	2.5% (25 kg) - 7.5% (75 kg)

## WEIGHTING TABLE

% KCL	DENSITY (Kg / M <sup>3</sup> )	K (mg / ltr)	Cl (mg / ltr)
1	1.005	5,244	4,756
2	1.011	10,594	9,606
3	1.017	15,996	14,504
4	1.024	21,502	19,498
5	1.030	27,009	24,491
6	1.037	32,621	29,579
7	1.043	38,285	34,715
8	1.050	44,053	39,947
9	1.057	49,875	45,225

Note: **POTASSIUM CHLORIDE** may not be suitable for use in all regions due to environmental restrictions. Please contact your local Mudex representative to discuss.



# PRO DRILL

Combination drilling lubricant and viscosifier

## DESCRIPTION

**PRO DRILL** is a liquid drilling fluid additive specifically developed as a one drum drilling lubricant and viscosifier. The high performance lubricant is blended at varying rates of polymer activity and polymer types to suit specific site needs

- PRO DRILL 10                      Lubricant with 10% Polymer
- PRO DRILL 20                      Lubricant with 20% Polymer
- PRO DRILL 30                      Lubricant with 30% Polymer

PRO DRILL can be blended with VIS PAC R / L, VIS TROL, POLY VIS HV / LV

## APPLICATIONS

**PRO DRILL** is a one drum liquid product that requires no extra mixing of polymers. Designed to reduce torque and vibration, has excellent hole cleaning properties. PRO DRILL minimizes wear on rods and equipment, improves penetration rates and extends bit life

## ADVANTAGES

- Can be used in diamond, horizontal directional drilling, geotechnical, and rotary drilling applications
- Effective in all water types.
- Liquid product which mixes easily and readily disperses in water without agitation
- Two-in-one concentrated product, acts as lubricant and hole cleaning viscosifier
- Biodegradable, environmentally acceptable, and non-hazardous

## TYPICAL PROPERTIES

Physical Appearance	Light brown Liquid
pH (1% Solution)	7.0 – 8.0



## USAGE

Drilling Application / Desired Result	Litres per 1000
Complete diamond drilling fluid	1.0 – 3.0
Improved core recovery and reduced torque and vibration	0.5 – 1.0

# SEAL X

Lost Circulation Material

## DESCRIPTION

**SEAL X** is a non-treated environmentally safe shredded paper used for lost circulation.

## APPLICATIONS

**SEAL X** is a lost circulation material used to seal fractures during drilling operations. It can also be spotted into loss zones to help regain returns. SEAL X can be pre mixed with water and pumped down the drilling string.

## ADVANTAGES

- Environmentally friendly
- Easy to use
- Can be premixed with water to form a slurry prior to use
- Can be added to the drilling fluid
- Can be used in conjunction with X PLUG.

## TYPICAL PROPERTIES

Physical Appearance	Grey granular paper
Specific Gravity	0.25



## USAGE

Add SEAL X to 20 litres of water in a pail and then pour or pump down the rods with the tube pulled. Pump into place and allow to plug fissures and fractures. Run tube and resume coring. Repeat as often as necessary to obtain fluid returns.

The use of other lost circulation materials such as X PLUG in conjunction with SEAL X can be effective particularly in larger diameter drilling operations.

# SODA ASH

Water softener

## DESCRIPTION

**SODA ASH** is a granular form of sodium carbonate ( $\text{Na}_2\text{CO}_3$ ) primarily used to condition and soften water and raise pH

## APPLICATIONS

**SODA ASH** is used to adjust pH into alkaline and remove calcium (hardness) from make-up water. This will allow for maximum performance from bentonite and polymers.

## ADVANTAGES

- Easy to mix
- Can eliminate calcium by converting it to insoluble carbonate
- Adjusts pH into alkaline range
- Improves performance of bentonite and polymers

## TYPICAL PROPERTIES

Physical Appearance	Flowing white powder
pH (5% solution)	11.5

## RECOMMENDED TREATMENT

- Hardness and pH levels of make-up water should be checked prior to additions of SODA ASH
- When treating make-up water, pH range should be maintained between 8 – 9.5
- SODA ASH should always be added prior to additions of bentonite and polymers
- If possible, add SODA ASH into the sump / tank system and not into the mixing tank
- Mix slowly through a hopper or eductor



## USAGE

Treatment levels will depend on the severity of the hardness or acidity of the make-up water.

¼ - 2 kilograms per 1000 litres of make up water is sufficient.

Use as required to reduce hardness of the make-up water but do not add in excess as overtreatment can then reduce the performance of bentonite and polymers

# STAR PLEX

Rheology Modifier

## DESCRIPTION

**STAR PLEX** is a specialty product used to enhance GEL X 180 and STAR GEL XTRA. STAR PLEX viscosifier is an inorganic extender for water based bentonite drilling fluids

## APPLICATIONS

**STAR PLEX** allows the formation of fluids with exceptional LSRV- a drilling fluid with both excellent dynamic and static fluid characteristics. This is indicated by both high-yield point and low plastic viscosity readings. When not in circulation, the mud instantly returns to a gelled state and immediately suspends drilled cuttings.

## ADVANTAGES

- High rate of penetration
- Excellent cuttings transport
- Excellent cuttings suspension
- Borehole stabilization through “gel locking” in the formation.

## TYPICAL PROPERTIES

Physical Appearance	White free-flowing powder
Specific Gravity	2.8 – 3.1
pH (1% solution)	6.5 - 8.0

## USAGE

**STAR PLEX** is typically mixed at a ratio of 20:1 with bentonite. Increasing the bentonite to GEL PLEX ratio will increase the carrying capacity and gel strengths

# STAR SORB (BLEND)

Waste Solidification Material

## DESCRIPTION

**STAR SORB (Blend)** is a solid, granular superabsorbent polymer clay blend that swells and absorbs many times its weight in aqueous solutions. STAR SORB (Blend) is intended to solidify wet soil, general wastewaters and simple sludge for disposal to landfill or certified special waste site.

## APPLICATIONS

**STAR SORB (Blend)** is designed to work in fluids with high pH or high Chloride levels and should be added directly to the waste stream in small amounts as it absorbs the liquid portion of the waste. STAR SORB (Blend) can be added directly to the mud pit or waste bins and agitated with excavation equipment to absorb any free fluid. The amount of STAR SORB (Blend) added will depend on the amount of liquid in the waste to be solidified. Cuttings waste would require a lot less material than lower density liquid waste streams like spent drilling fluid.

## TYPICAL PROPERTIES

- STAR SORB (Blend) is a high efficiency absorbent that expands in volume by less than 1%
- Much more effective than fly ash, sawdust or recycled diaper absorbents.
- Effective in muds with high pH or Chlorides.
- Environmentally acceptable.
- Extremely cost effective.
- Mixes easily into waste drilling fluid or clean water.
- No special mixing tanks, equipment or pumps required.
- Single swell polymer that won't hydrate again after it is dehydrated

## TYPICAL PROPERTIES

Physical Appearance	White and Tan Granular Powder
pH	0.8 – 1.0



## USAGE

Care should be taken to evenly distribute the product into the waste stream for maximum contact. The active working time for STAR SORB (Blend) to reach its swelling capacity is approximately 10 – 15 minutes.



# STAR SORB

Waste Solidification Material

## DESCRIPTION

**STAR SORB** is a solid, granular superabsorbent polymer that swells and absorbs many its weight in aqueous solutions. STAR SORB is intended to solidify wet soil, general wastewaters and simple sludge for disposal to landfill or certified special waste site.

## APPLICATIONS

**STAR SORB** should be added directly to the waste stream in small amounts as it absorbs the liquid portion of the waste. The amount of STAR SORB added will depend on the amount of liquid in the waste to be solidified. Cuttings waste would require a lot less material than lower density liquid waste streams like spent drilling fluid.

## TYPICAL PROPERTIES

- STAR SORB is a high efficiency absorbent that expands in volume by less than 1%
- Much more effective then fly ash, sawdust or recycled diaper absorbents.
- Environmentally acceptable.
- Extremely cost effective.
- Mixes easily into waste drilling fluid or clean water.
- No special mixing tanks, equipment or pumps required.
- Single swell polymer that wont hydrate again after it is dehydrated

## TYPICAL PROPERTIES

Physical Appearance	White Granular Powder
pH	0.8 – 1.0

## USAGE

Care should be taken to evenly distribute the product into the waste stream for maximum contact. The active working time for STAR SORB to reach its swelling capacity is approximately 10 – 15 minutes.

# TRUCKWASH

Biodegradable Truckwash

## DESCRIPTION

**TRUCKWASH** is a concentrated multi-purpose biodegradable, caustic and phosphate free, streak free heavy duty truck wash developed to meet current market expectations focusing on removing oil, grease, coal and road grime from plant and equipment. TRUCKWASH is designed to perform hard water conditions making it compatible with most mine site raw water supplies.

## APPLICATIONS

**TRUCKWASH** can be used on all surfaces including plastic, rubber, chrome, aluminium and paintwork to remove grime and dirt. TRUCKWASH will safely remove grease and road grime from mining and heavy industrial equipment, cars, 4WDs, caravans and boats. The product will not streak and is suitable for use on side curtains of trailers and all fabrics found in the transport and marine environments.

## ADVANTAGES

- Biodegradable, environmentally acceptable, and non-hazardous
- Highly concentrated product and economical
- Water based
- Safe to use
- Effective in most water types
- Safely removes heavy deposits of grease, oil, exhaust stains from all washable surfaces.

## TYPICAL PROPERTIES

Physical Appearance	Green liquid
pH(1% solution)	8 - 9
Solubility	100%



## USAGE

Application / Desired Result	Concentration
General purpose cleaning	1 : 100
Vehicle Cleaning	1 : 30
Heavy duty cleaning or light degreasing	1 : 10

# TUBE LUBE

## Core Barrel Soap

### DESCRIPTION

**TUBE LUBE** is a thickened, natural fatty acid that provides excellent lubrication within the inner core barrel to facilitate entry and removal of the core sample. It can be used effectively in all types of core barrels and is 100 % biodegradable and non-toxic.

### APPLICATIONS

**TUBE LUBE** can be used by itself or mixed with small amounts of POLY VIS HV / RD products for increased durability and lubrication.

### ADVANTAGES

- Lubricates the inner tube allowing for easy entry of even the most broken core.
- Eases the removal of the core sample from the inner tube
- Effective in all water types
- Biodegradable, environmentally friendly and non-hazardous
- Does not stain the core

### TYPICAL PROPERTIES

Physical Appearance	Light brown grease
pH	N/A



### USAGE

To lubricate the inner tube, apply a generous spoonful of Tube Lube inside the inner tube above the core lifter prior to attaching the core lifter casing.

Take care to not over apply or some core staining may become present

# UNIVERSAL

Biodegradable Diamond Drilling Lubricant for Hard Water

## DESCRIPTION

**UNIVERSAL** is a concentrated biodegradable, environmentally friendly oil specifically developed as an extreme pressure diamond drilling lubricant for hard water. **UNIVERSAL** properties are similar to **CORE X** that when mixed into the makeup water **UNIVERSAL** instantly disperses and becomes a micro-emulsion, reducing drill string torque, increasing penetration rates and significantly extending bit life.

## APPLICATIONS

**UNIVERSAL** is specifically designed for poor quality mine water, hard or salty water where it eliminates rod vibration and rattle in diamond drilling operations by depositing a thin film of oil between the rods and the bore hole wall or casing. **UNIVERSAL** reduces torque on the rod string, minimizes wear on rods and equipment and improves penetration rates and extends bit life.

## ADVANTAGES

- Highly concentrated product and economical
- Biodegradable, environmentally acceptable, and non-hazardous
- Mixes easily and readily disperses in water without agitation
- Increases productivity by increasing penetration rates and reducing bit costs
- Does not stain the core
- Increases rig performance.

## TYPICAL PROPERTIES

Physical Appearance	Red liquid
pH(1% solution)	8.0 – 9.0
Solubility	100%



## USAGE

Drilling Application / Desired Result	litres per 1000
To reduce torque and vibration	2.0 – 5.0
For extremely hard abrasive ground or in deep, directional holes	5.0 – 10.0

# VIS PAC L (ALL GRADES)

Non Viscosifying Cellulose Polymer

## DESCRIPTION

**VIS PAC L** polyanionic cellulose is a high-quality, water-soluble polymer designed to control fluid loss with a minimal increase in viscosity in water-base drilling fluids.

**VIS PAC LD** is a readily dispersible high-quality, water-soluble polymer specially formulated to be used where there is limited mixing equipment due to drill site space restrictions. VIS PAC LD rapidly disperses and provides fluid loss control in both fresh and saline water.

## APPLICATIONS

**VIS PAC L & VIS PAC LD** are used where fluid loss control is required, without affecting the beneficial rheological properties of the drilling fluid and is also effective in flooded reverse drilling where low viscosity fluids are required.

## ADVANTAGES

- Disperses quickly and produces minimal viscosity increase while providing fluid loss control
- Encapsulates shale particles to inhibit swelling and dispersion
- Resists bacterial attack, requiring no biocides or preservatives
- Functions over a wide range of salinity, hardness and pH levels
- Applicable in all water-based fluids, ranging from low solids, non-dispersed polymer systems to high-density dispersed systems.

## TYPICAL PROPERTIES

Physical Appearance	Beige free-flowing powder
pH(1% solution)	6.5 – 8.0
Specific Gravity	1.5 – 1.6

## USAGE

Drilling Application / Desired Result	Kilograms per 1000
To reduce torque and improve core recovery	1.0 – 3.0
To stabilize unconsolidated formations, clays etc	3.0 – 5.0
To improve the properties of a GEL X mud	0.5 – 2.0

Mix slowly through a mud hopper or a PVC eductor.



# VIS PAC L

Non Viscosifying Cellulose Polymer

## DESCRIPTION

**VIS PAC L** polyanionic cellulose is a high-quality, water-soluble polymer designed to control fluid loss with a minimal increase in viscosity in water-base drilling fluids.

## APPLICATIONS

**VIS PAC L** is used where fluid loss control is required, without affecting the beneficial rheological properties of the drilling fluid and is also effective in flooded reverse drilling where low viscosity fluids are required.

## ADVANTAGES

- Disperses quickly and produces minimal viscosity increase while providing fluid loss control
- Encapsulates shale particles to inhibit swelling and dispersion
- Resists bacterial attack, requiring no biocides or preservatives
- Functions over a wide range of salinity, hardness and pH levels
- Applicable in all water-based fluids, ranging from low solids, non-dispersed polymer systems to high-density dispersed systems.

## TYPICAL PROPERTIES

Physical Appearance	Beige free-flowing powder
pH(1% solution)	6.5 – 8.0
Specific Gravity	1.5 – 1.6

## USAGE

Drilling Application / Desired Result	Kilograms per 1000
To reduce torque and improve core recovery	1.0 – 3.0
To stabilize unconsolidated formations, clays etc	3.0 – 5.0
To improve the properties of a GEL X mud	0.5 – 2.0

Mix slowly through a mud hopper or a PVC eductor.

# VIS PAC RD

Readily Dispersible Viscosifying Cellulose Polymer

## DESCRIPTION

**VIS PAC RD** polyanionic cellulose is a high-quality, water-soluble polymer designed to control fluid loss and increase viscosity in water-base muds.

## APPLICATIONS

**VIS PAC RD** controls fluid loss and provides viscosity in freshwater and seawater drilling fluid systems and forms a thin, resilient, low-permeability filter cake minimizing the potential for formation sloughing and the invasion of filtrate and mud solids into permeable formations.

**VIS PAC R** polyanionic cellulose is a high-quality, water-soluble polymer designed to control fluid loss and increase viscosity in water-base muds. **VIS PAC R** can be a more cost-effective option than **VIS PAC RD**, providing the same fluid properties but is not as readily dispersible and requires efficient mixing equipment.

## ADVANTAGES

- Easy mixing and effective in low concentrations for controlling fluid loss and building viscosity
- Encapsulates shale particles to inhibit swelling and dispersion
- Resists bacterial attack, requiring no biocides or preservatives
- Functions over a wide range of salinity, hardness and pH levels
- Applicable in all water-based fluids, ranging from low solids, non-dispersed polymer systems to high-density dispersed systems.

## TYPICAL PROPERTIES

Physical Appearance	Beige free-flowing powder
pH(1% solution)	6.5 – 8.0
Specific Gravity	1.5 – 1.6

## USAGE

Drilling Application / Desired Result	Kilograms per 1000
To reduce torque and improve core recovery	1.0 – 3.0
To stabilize unconsolidated formations, clays etc	3.0 – 5.0
To improve the properties of a GEL X mud	0.5 – 2.0

Mix slowly through a mud hopper or a PVC eductor.

# VIS TROL RD

A Readily Dispersible Blend of Cellulose Polymers

## DESCRIPTION

**VIS TROL RD** is a readily dispersible combination of high-quality, water-soluble bio polymers designed to control fluid loss and increase viscosity in water-base muds. Designed to be used where there is limited mixing equipment VIS TROL RD provides immediate viscosity and fluid loss control in both fresh and saline water.

**VIS TROL** is a combination of high-quality, water-soluble bio polymers designed to control fluid loss and increase viscosity in water-base muds. VIS TROL can be a more cost-effective option than VIS TROL RD, providing the same fluid properties but is not as readily dispersible and requires efficient mixing equipment.

## APPLICATIONS

**VIS TROL RD** controls fluid loss and provides viscosity in freshwater, seawater, KCl and salt muds forming a thin, resilient, low-permeability filter cake. VIS TROL RD minimizes the potential for differential sticking and the invasion of filtrate/mud solids into permeable formations.

## ADVANTAGES

- Mixes easier than standard Trol without fish eyes
- Effective in low concentrations for controlling fluid loss and building viscosity
- Encapsulates shale particles to inhibit swelling and dispersion
- Resists bacterial attack, requiring no biocides or preservatives
- Functions over a wide range of salinity, hardness and pH levels
- Applicable in all water-based fluids, ranging from low solids, non-dispersed polymer systems to high-density dispersed systems.

## TYPICAL PROPERTIES

Physical Appearance	Beige free-flowing powder
pH(1% solution)	6.5 – 8.0
Specific Gravity	1.5 – 1.6



## USAGE

Drilling Application / Desired Result	kgs per 1000
Complete drilling fluid	1.0 – 2.5
Improved core recovery & reduced torque and vibration	2.0 – 5.0
To improve the properties of a bentonite mud	0.5 – 2.0

Mix through a mud hopper or a PVC eductor.

# X DET 202

Drilling Detergent

## DESCRIPTION

**X DET 202** drilling detergent is a liquid blend of specialty surfactants and designed to reduce the surface tension of water base mud systems and reduce the sticking tendency of reactive shale and clays.

## APPLICATIONS

**X DET 202** reduces torque and drag and is used primarily in surface and intermediate sections during drilling to minimize bit and BHA balling and mud rings. X DET 202 is effective in all water base systems including freshwater, brackish water, seawater and saturated saltwater fluids.

## ADVANTAGES

- Minimizes bit and BHA balling and mud rings
- Improves water- solids and reduces the sticking tendencies of reactive shale cuttings
- Functions as an emulsifier, reducing the viscosity of oil contaminated muds
- Biodegradable and non-toxic
- Effective in fresh and poor quality water.

## TYPICAL PROPERTIES

Physical Appearance	Red liquid
pH(1% solution)	6.0 – 8.0
Solubility	100%



## USAGE

Drilling Application / Desired Result	Litres per 1000
Clay	1 – 3
Sticky Clay	2 – 5
Reduce surface tension	1 – 2

# X FRAC (DD)

Lost Circulation Material

## DESCRIPTION

**X FRAC (DD)** is a convenient, fast acting and extremely cost effective solution in most lost circulation conditions, including fractures, weak channels to underground cross-flows and vugular formations. X FRAC (DD) is formulated specifically for the Diamond Drilling market but may be utilized in any drilling environment to control seepage losses.

## APPLICATIONS

**X FRAC (DD)** is used to remediate lost circulation in a wide range of conditions with water based drilling fluids. X FRAC is used to seal fractures and highly permeable formations and can be easily added to open drill pipe. As a premixed lost circulation material X FRAC eliminates the guesswork associated with a response to losses will easily mix into existing drilling fluid or clean water. X FRAC (DD) is packaged containing multi purpose rod wipers, eliminating the need for spacers to be stored on site and will prevent any LCM migrating behind the core barrel inner tube assembly.

## ADVANTAGES

- Environmentally acceptable
- Pre-blended packaging containing bridging agents, granules and sealing agents
- Extremely cost effective
- No activators, accelerators or retarders required
- Mixes easily into existing drilling fluid or clean water
- Easily added into open rod strings as a pill
- Packaged with multi purpose rod wipers, eliminating the need for drill crews to source spacers
- No special mixing tanks, equipment or pumps required.
- Not effected by pH

## TYPICAL PROPERTIES

Physical Appearance	Blend of various fibres, granules and other materials
Specific Gravity	0.5



## USAGE

Add 5 – 10kg of X FRAC (DD) to 20 litres of water in a pail and then pour down the rods, with the tube pulled, insert a provided spacer. Pump into place and allow to plug fissures and fractures. Run tube and resume coring. Repeat as often as necessary to obtain fluid returns.

The use of other lost circulation materials such as X PLUG or SEAL X in conjunction with X FRAC (DD) can be effective particularly in larger diameter drilling operations.



# X FRAC (SUPA SEAL)

Lost Circulation Material

## DESCRIPTION

**X FRAC (SUPA SEAL)** is a convenient, fast acting and extremely cost effective solution in most lost circulation conditions, including fractures, weak channels to underground cross-flows and vugular formations.

## APPLICATIONS

**X FRAC (SUPA SEAL)** is used to remediate lost circulation in a wide range of conditions with water based drilling fluids. X FRAC is used to seal large fractures and highly permeable formations and can be easily pumped through large jets or open pipe. As a premixed lost circulation material X FRAC eliminates the guesswork associated with a response to severe losses. Will easily mix into existing drilling fluid or clean water.

## ADVANTAGES

- Environmentally acceptable
- Pre-blended packaging containing bridging agents, granules and sealing agents
- Extremely cost effective
- No activators, accelerators or retarders required
- Mixes easily into existing drilling fluid or clean water
- Easily added into open rod strings as a pill
- No special mixing tanks, equipment or pumps required.
- Not effected by pH

## TYPICAL PROPERTIES

Physical Appearance	Blend of various fibres, granules and other materials
Specific Gravity	0.5



## USAGE

Drilling Application	Litres per 1000
Active rig tank or suction pit (keep agitated)	10 – 15 kilos per 1000 litres of make-up water
LCM Pill	Partially hydrate 5 – 10kg per 20lts of either existing drilling fluid or clean make up water and add directly into open rod string.

The use of other lost circulation materials such as X PLUG or SEAL X in conjunction with X FRAC (Supa Seal) can be effective particularly in larger diameter drilling operations.

# X PLUG (COARSE)

Swelling Polymer

## DESCRIPTION

**X PLUG (COARSE)** is a large granular sized swelling copolymer for lost circulation that expands over 200 times its volume in freshwater.

## APPLICATIONS

**X PLUG (COARSE)** is a lost circulation material used to seal fractures and voids during drilling operations. It can also be spotted in caving zones to consolidate loose formations and help with core recovery. Hydration occurs in 20 to 30 minutes.

## ADVANTAGES

- X PLUG is environmentally friendly
- Safe and easy to use
- X PLUG can be hydrated prior to use
- X PLUG will accumulate in a variety of fracture sizes due to its swelling capacity and particle size distribution.

## TYPICAL PROPERTIES

Physical Appearance	White coarse granular powder
pH(1% solution)	8.5 – 9.5
Specific Gravity	0.8 – 9.5

## USAGE

Add 0.3 – 0.5 kg X PLUG to 20 litres of water in a pail and then pour or pump down the rods with the tube pulled. Pump into place and allow to swell and plug fissures and fractures. Run tube and resume coring. Repeat as often as necessary to obtain fluid returns.

The use of other lost circulation materials such as SEAL X in conjunction with X PLUG can be effective especially in larger diameter drilling operations.

# X SHEAR

Shear Stabilizing Additive

## DESCRIPTION

**X SHEAR** is a specially formulated blend of low viscosity polymers and powdered inhibitors used to stabilize water sensitive formations such as shales, mudstones, and aggressive shear zones. This unique blend can be used in diamond and rotary drilling operations in conditions where products such as inhibitive polymers, Potassium Chloride, salt etc are ineffective in preventing formation swelling and maintaining hole stability.

**LIQUID X SHEAR** is also available for sites with limited space or mixing capabilities.

## APPLICATIONS

**X SHEAR** is used to provide hole stability in shear zones with minimal to no increase in fluid viscosity helping to control pump pressures when penetrating unconsolidated and fractured ground while improving core recovery in water sensitive formations. X SHEAR will control the dispersive tendency of mudstones reducing water invasion into micro fractures associated with mudstones and shales.

## ADVANTAGES

- Disperses quickly and produces minimal viscosity increase while providing fluid loss control
- Encapsulates shale particles to inhibit swelling and dispersion
- Resists bacterial attack, requiring no biocides or preservatives
- Functions over a wide range of salinity, hardness and pH levels
- Applicable in all water-based fluids, ranging from low solids, non-dispersed polymer systems to high-density dispersed systems

## TYPICAL PROPERTIES

Physical Appearance	White powder
pH(1% solution)	8.5 – 9.5



## USAGE

Drilling Application / Desired Result	kgs per 1000
to build a fresh drilling fluid or add to an existing mud system	10 – 50

# X TORQUE

Biodegradable Drilling Lubricant

## DESCRIPTION

**X TORQUE** is an ecologically friendly drilling fluid lubricant and shale control additive for water based mud systems. It is based on Oleochemicals, which are derived from natural oils and fats, and is 100% biodegradable.

## APPLICATIONS

**X TORQUE** improves lubricity results in torque and drag reduction allowing faster, deeper and highly deviated drilling. **X TORQUE** is effective in lateral drilling operations such as Horizontal Directional Drilling (HDD) and in mining coring operations where rate of penetration improvements and hole stability are required.

## ADVANTAGES

- Highly concentrated product and economical
- Biodegradable, environmentally acceptable, and non-hazardous
- Mixes easily and readily disperses in water without agitation
- Increases productivity by increasing penetration rates and reducing bit costs
- Increases rig performance
- Does not affect mud rheology
- Improves API Filtration properties

## TYPICAL PROPERTIES

Physical Appearance	Dark brown liquid
pH(1% solution)	8.0 – 9.0
Solubility	100%



## USAGE

Drilling Application / Desired Result	Litres per 1000
To reduce torque and vibration	2 – 5
Extremely hard abrasive ground or in deep directional holes	5 – 10

# XAN VIS (ALL GRADES)

Viscosifying Biopolymer

## DESCRIPTION

**XAN VIS** is a biopolymer used for increasing viscosity in water-base systems. Small additions provide viscosity and weight-material suspension for all water-base mud systems. XAN VIS has the unique ability to produce a fluid that is highly shear-thinning (LSRV).

## APPLICATIONS

**XAN VIS** effectively increases viscosity for cuttings transport and suspension in all water-base fluids, from highly weighted to low-solids systems, and including freshwater, seawater, salt and heavy-brine systems. Shear-thinning fluids containing XAN VIS have low effective viscosities at the high shear rates encountered inside the drill string and at the bit. This low effective viscosity for minimal pressure losses and standpipe pressures allows optimized hydraulics and maximized rates of penetration. Conversely, at the low shear rates experienced in the annulus, XAN VIS enables the drilling fluid to have a high effective viscosity for adequately cleaning the well and suspending cuttings.

**XAN VIS XD** is a readily dispersible formulation of XAN VIS and recommended for use where mixing systems are inefficient or limited due to site restrictions. Readily Dispersible products will shear with limited mixing equipment. XAN VIS XD has very similar characteristics to XAN VIS and usage rates for each product are not expected to vary.

## ADVANTAGES

- Highly effective low shear rate viscosifier for improved hydraulics and power at the bit
- Controls fluid loss and formation invasion
- Minimizes formation damage
- Provides superior hole cleaning in horizontal bores
- Product purity leaves minimal residue in producing formations after breaker treatment
- Excellent hole cleaning and suspension agent
- Reduces torque & drag and ECD.
- Non-toxic and environmentally acceptable
- Functions over a wide range of salinity, hardness and pH levels.

## TYPICAL PROPERTIES

Physical Appearance	Cream to Tan free-flowing powder
Solubility in Water	100%
Specific Gravity	1.5 – 1.6



## USAGE

Drilling Application / Desired Result	Kilograms per 1000
Non invasive fluid	1 – 6
Improved hole cleaning	1 – 3
Larger diameter bore	1 – 6

Mix slowly through a mud hopper or a PVC eductor



# XPANDA FOAM A & B

## Two Part Expanding Foam System

### DESCRIPTION

**XPANDA FOAM A & B** is a two-part liquid component foaming system that produces a rigid polyurethane foam that will expand 30 - 35 times its original volume. XPANDA FOAM is a blend of polyols, catalysts and blowing agents and is CFC, HCFC and HFC free, with a zero ODP, GWP and no VOC.

### APPLICATIONS

**XPANDA FOAM A & B** is an alternative for pre-collar sealing instead of cement. It can also be used for scaling cavities or thief zones and is highly effective in small quantities. XPANDA FOAM can be used to stabilize unconsolidated and caving surface formations.

### ADVANTAGES

- Easy to use.
- Supplied in the correct mixing ratio.
- Fast yielding.
- Built in fire retardant.
- Cost-effective.

### TYPICAL PROPERTIES

	XPANDA FOAM A	XPANDA FOAM B
Physical Appearance	Clear Amber liquid	Dark brown liquid
Specific gravity	1.13	1.23

Note:

ODP = Ozone depleting potential

GWP = Global Warming Potential

VOC = Volatile organic compound



### USAGE

**XPANDA FOAM A & B** is poured into a clean 20 litre bucket in the ratio of 1 tin (0.8kg) of XPANDA FOAM A to 1 tin (1.2kg) of XPANDA FOAM B. The mixture is stirred for 15-20 seconds until a cream colour develops. The mixture is then immediately poured down the pre-colour annulus or thief zone. The rigid polyurethane foam will develop and set within minutes.

Mix Time	15 – 20 seconds
Start expansion time	18 – 25 seconds
End expansion time	90 – 100 seconds
Tacky free	120 – 140 seconds
Density	29 – 31 kg/m <sup>3</sup>

# XT ROD GREASE

Diamond Drilling Rod Grease

## DESCRIPTION

**XT ROD GREASE** is a heavy duty and extremely tacky diamond drill rod grease. Utilizing a specialty thickener, heavy duty base oils, tacky additives and a unique specialty manufacturing process. This results in outstanding thick, strong, and tacky diamond drill rod grease allowing for long lasting rod lubrication. Drilling costs are reduced using XT ROD GREASE because re-greasing intervals are minimized due to the long-lasting rod lubrication.

## APPLICATIONS

**XT ROD GREASE** is very tenacious and is recommended for underground or surface applications. It is compatible with all types of drilling fluid systems. XT ROD GREASE is also very effective in dry hole conditions without fluid returns.

## ADVANTAGES

- Extends rod life and reduces maintenance costs.
- Superior resistance to water washing and centrifugal separation.
- Corrosion, wear and oxidation resistance
- Minimizes friction and wear on the drill string.
- Applies to wet pipe.

## TYPICAL PROPERTIES

Physical Appearance	Dark brown grease
pH	N/A

## USAGE

Apply a generous amount smeared on the outside of the drill rods.

# ZN-50

## Drill Rod Thread Grease

### DESCRIPTION

**ZN-50** is a heavy duty and extremely tacky NLGI 2 thread grease. Utilizing oxidation inhibitors, heavy duty base oils, specialty tackifiers with 50% finely powdered metallic Zinc. ZN-50 is formulated to prevent galling, water washout, friction, fling off and wear.

### APPLICATIONS

**ZN-50** is used for heavy loaded components which are subjected to arduous conditions and hot, dusty or wet environments. Can be used in a wide variety of applications, such as a thread lubricant or for sliding surfaces but particularly for drill rod threads.

### ADVANTAGES

- Resistant to high temperatures.
- Excellent adhesion properties.
- Corrosion, wear and oxidation resistance.
- Increase thread life.
- Minimizes wear.
- Conforms to API RP 7A1, Fiction factor 0.98.

### TYPICAL PROPERTIES

Physical Appearance	Smooth grey grease
pH	N/A

### USAGE

Apply a generous amount smeared on the threaded sections of the drill rod tool joint.



## Made to Order Products

### **ANTI FOAM – Foam Neutralising Agent.**

#### **DESCRIPTION**

**ANTI FOAM** neutralises the active ingredient in foaming agents and assists with site rehabilitation.

### **BIO HAMMER OIL ES – Low Viscosity Biodegradable Hammer oil.**

#### **DESCRIPTION**

**BIO HAMMER OIL ES** is a quality down hole hammer lubricant formulated to impart wear protection to moving metal parts. **BIO HAMMER OIL ES** contains a specialized filming agent that protects the piston and sleeve from scuffing and heat. **BIO HAMMER OIL ES** is Biodegradable, non-hazardous and is specially made for colder climates.

### **BIO PIPE FREE – Specialty Product to reverse differential sticking**

#### **DESCRIPTION**

**BIO PIPE FREE** is an oil soluble surfactant formulated to remEDIATE differential sticking.

### **BORE REJUVENATOR – Iron Oxide Cleaning Agent for Water Bores**

#### **DESCRIPTION**

**BORE REJUVENATOR** is a powerful cleaning agent which has been developed to easily remove Iron Oxide residue which can develop on the inside of water wells, submersible pumps, production zone screens, head-works surface pipework and surface sprinkler systems.

### **CEMENT FR – Cement Plastisier and Accelerator**

#### **DESCRIPTION**

**CEMENT FR** is designed for use as a cement plasticsier or friction reducer. **CEMENT FX** makes high SG slurries more pumpable without compromising strength or setting times.

### **CEMENT X – Cement Accelerant**

#### **DESCRIPTION**

**CEMENT X** is designed for use as a cement accelerant and replaces calcium chloride

### **CITRIC ACID – pH Adjustment Chemical**

#### **DESCRIPTION**

**CITRIC ACID** is used to reduce pH, treat out soluble calcium and neutralise iron and other metal poly-cations

### **CLAY SLAYER – Dry powder clay inhibitor**

#### **DESCRIPTION**

**CLAY SLAYER** is a dry clay stabilizer blend designed for use as a permanent clay/shale stabilizer in all clay-based geological formations. **CLAY SLAYER** provides excellent shale and clay control and greatly reduces bit balling and mud rings by inhibiting and encapsulating produced cuttings. **CLAY SLAYER** is compatible with all drilling fluids as well as bentonite, synthetic polymers and biopolymers.

## Made to Order Products

### **DEX – Non-ionic, low viscosity filtration additive**

#### **DESCRIPTION**

**DEX** is a modified and bacterially stabilised starch which provides filtration control and borehole stability in normal water based drilling fluids as well as drilling fluids that must remain free of ionic additives. Through its coating ability it will reduce dispersion of clay and assist in stabilizing reactive formations

### **DRILLSEAL – Hole Stabiliser for Blast Hole Drilling**

#### **DESCRIPTION**

**DRILLSEAL** is a blend of high-quality water-soluble polymer resin designed to stabilise formations in Blast Hole Drilling by sealing fractures and forming a polymer membrane on the formation walls during the drilling process.

### **FOAM XTREME – Pre-blended Drilling Foam and High-performance Polymer.**

#### **DESCRIPTION**

**FOAM XTREME** is a pre-blended, concentrated biodegradable foaming agent and a high-performance polymer specifically designed to be a one-drum stiff foam solution. Stiff foams last considerably longer than other foam types.

### **GEL (TURBO GEL) – One sack drilling system**

#### **DESCRIPTION**

**GEL (TURBO GEL)** is a proprietary blended bentonite designed as a single sack product specifically engineered for diamond drilling. **GEL (TURBO GEL)** provides viscosity and filtration control which can eliminate the need to add Trol or PHPA polymers to the mud system.

### **KLA COVER – Clay and Shale Inhibitor.**

#### **DESCRIPTION**

**KLA COVER** is a liquid clay & shale inhibitor created to improve the sticking tendencies and to stabilise reactive clay formations. **KLA COVER** is environmentally acceptable, resilient to poor water sources and suitable to be used in all types of drilling that encounter issues with clays

### **KLA KLEEN – Liquid Clay Controller**

#### **DESCRIPTION**

**KLA KLEEN** is a one drum solution acting quickly to break up mud rings and clay deposits on the bottom hole assembly and reduces the sticking tendency of reactive shale and clays. **KLA KLEEN** is compatible with all drilling fluids, bentonites, synthetic polymers and biopolymers and is suitable to be used in conjunction with cleaning units, shaker screens and centrifuges.



## Made to Order Products

### **LIQUID ENVIROVIS – Viscosifying Natural Polymer in a Biodegradable Vegetable Oil.**

#### **DESCRIPTION**

**LIQUID ENVIRO VIS** is a cellulose-based natural polymer suspended in a highly refined biodegradable vegetable oil. **LIQUID ENVIRO VIS** is a drilling fluid system that promotes borehole stability, exhibits excellent hole cleaning and cuttings suspension. **LIQUID ENVIRO VIS** is easily broken down with hypochlorite oxidizing agents or enzyme breakers.

### **LIQUID NIF – Non Invasive Fluid in a Biodegradable Vegetable Oil.**

#### **DESCRIPTION**

**LIQUID NIF** is a blend of high-quality water-soluble biopolymers suspended in a highly refined biodegradable vegetable oil, designed as a viscosifier to control fluid loss with minimal fluid invasion.

### **LIQUID VIS PAC L – Non Viscosifying Cellulose Polymer in a Biodegradable Vegetable Oil.**

#### **DESCRIPTION**

**LIQUID VIS PAC L** is a high-quality polyanionic cellulose, water-soluble polymer suspended in a highly refined biodegradable vegetable oil, designed to control fluid loss with a minimal increase in viscosity in water based drilling fluids.

### **LIQUID VIS PAC R – A Blend of Cellulose Polymers in a Biodegradable Vegetable Oil.**

#### **DESCRIPTION**

**LIQUID VIS PAC R** is a combination of high-quality, water-soluble cellulose polymers suspended in a highly refined biodegradable vegetable oil designed to control fluid loss and increase viscosity in water-based muds. **LIQUID VIS PAC R** provides immediate viscosity and fluid loss control in both fresh and saline water

### **LIQUID X SHEAR – Liquid Shear Stabilising Additive**

#### **DESCRIPTION**

**LIQUID X SHEAR** is a specially formulated blend of low viscosity polymers and liquid inhibitors used to stabilize water sensitive formations such as shales, mudstones, and aggressive shear zones. This unique blend can be used in diamond and rotary drilling operations in conditions where products such as inhibitive polymers, Potassium Chloride, salt etc are ineffective in preventing formation swelling and maintaining hole stability.

### **LIQUID XAN – Viscosifying Biopolymer in a Biodegradable Vegetable Oil.**

#### **DESCRIPTION**

**LIQUID XAN VIS** is a biopolymer suspended in a highly refined biodegradable vegetable oil designed used for increasing viscosity in water-base systems. Small additions provide viscosity and weight-material suspension for all water-base mud systems. **LIQUID XAN VIS** has the unique ability to produce a fluid that is highly shear-thinning (LSRV).

# Made to Order Products

## **PRODRILL – Combination drilling lubricant and viscosifier**

### **DESCRIPTION**

**PRO DRILL** is a liquid drilling fluid additive specifically developed as a one drum drilling lubricant and viscosifier. The high performance lubricant is blended at varying rates of polymer activity and polymer types to suit specific site needs

- PRO DRILL 10                      Lubricant with 10% Polymer
- PRO DRILL 20                      Lubricant with 20% Polymer
- PRO DRILL 30                      Lubricant with 30% Polymer

PRO DRILL can be blended with VIS PAC R / L, VIS TROL, POLY VIS HV / LV

## **RAPID GEL – High Yield Wyoming Bentonite**

### **DESCRIPTION**

**RAPIDGEL** viscosifier is a premium extreme-fine grind bentonite blended with special extenders, producing a product that will reach maximum yield in 2-3 minutes rather than the standard 15 minutes.

## **RIG WASH – Biodegradable multi-purpose degreaser**

### **DESCRIPTION**

**RIG WASH** is a biodegradable, solvent free concentrated degreaser. This multipurpose degreaser is capable of removing the day to day grime and dirt build up from general operations on your machinery. It is highly effective on its own once sprayed neat onto the machinery and does not require scrubbing.

## **SAND STAR – Specialty Core Recovery Polymer.**

### **DESCRIPTION**

**SAND STAR** is a specialty blend of synthetic polymers specifically designed for drilling through unconsolidated sand and silt. It also provides cuttings encapsulation and shale stabilization. SAND STAR acts as a viscosifier, friction reducer and fluid loss control additive in fresh and saltwater.

## **SHEAR TROL – Shear Stabilising Additive.**

### **DESCRIPTION**

**SHEAR TROL** is a specially formulated blend of low viscosity polymers and powdered inhibitors used to stabilise water sensitive formations such as shales, mudstones, and aggressive shear zones. This unique blend can be used in diamond and rotary drilling operations in conditions where products such as inhibitive polymers, Potassium Chloride, salt etc are ineffective in preventing formation swelling and maintaining hole stability.

## **SLOW CEMENT – Cement retarder**

### **DESCRIPTION**

**SLOW CEMENT** is designed for use as a cement retarder to delay the setting time. SLOW CEMENT keeps cement slurries workable for longer periods.

## Made to Order Products

### **STARSORB (COARSE) – Waste solidification material**

#### **DESCRIPTION**

**STAR SORB** is a solid, granular superabsorbent large grain polymer that swells and absorbs many its weight in aqueous solutions. STAR SORB is intended to solidify wet soil, general wastewaters and simple sludge for disposal to landfill or certified special waste site.

### **VIS TROL – Blend of cellulose polymers**

#### **DESCRIPTION**

**VIS TROL** is a combination of high-quality, water-soluble bio polymers designed to control fluid loss and increase viscosity in water-base muds. VIS TROL can be a more cost-effective option than VIS TROL RD, providing the same fluid properties but is not as readily dispersible and requires efficient mixing equipment.

### **WELL GEL – Pre-mixed casing pack and lost circulation material**

#### **DESCRIPTION**

**WELL GEL** is a liquid blend of swell-able polymer crystals and void filling additives in a lubricating oil suitable for use as a casing pack additive or a ready to use lost circulation additive. A secondary function of WELL GEL is as a hole stabiliser and core recovery aid in friable, unconsolidated ground conditions.

## Other Products Supplied by Mudex

**BENTONITE CHIPS** – Hole abandonment material

**BENTONITE PELLETS** – Slow Release Coated and Uncoated

**CALCIUM CHLORIDE** – Cement accelerator

**CITRIC ACID** – pH adjust water conditioner

**MICA** – Lost circulation material

**SODIUM BICARBONATE** – pH neutral water conditioner

**SODIUM / CALCIUM HYPOCHLORITE** – Chlorine in either liquid or dry form

**CEMENT –**

- Class G
- Fondu
- Gp
- Low Heat / Sulphate Resistant
- Portland
- Quick Set

**WEIGHTING AGENTS –**

- Barite
- Potassium Formate
- Potassium Sulphate
- Sodium Chloride
- Sodium Formate

## Packaging Options

**Liquids** – Available in

- 14.5 litre ECODRUM™ or ECOBUCKET™
- 20 litre Spout bucket
- 20 litre Hard Walled Plastic Bottle
- 25 litre Hard Walled Plastic Bottle
- 1000 litre IBC

**Dry Powders** – Available in

- 8 Kilogram Hard Walled Plastic Bucket
- 10 kilogram Hard Walled Plastic Bucket
- 11 – 13 kilogram ECODRUM™ or ECOBUCKET™
- 15 kilogram Hard Walled Plastic Bucket
- 15 kilogram Dual Walled Biodegradable Bag
- 25 kilogram Dual Walled Biodegradable Bag
- 500 – 1,200 kilogram Polyweave Bulker Bag

## Testing Equipment Supplied by Mudex

Chlorides Test Kit

Filter Press

Hardness Test Strips

Hardness Test Kit

Marsh Funnel

Marsh Cup

Mud Balance

Ph Test Strips

Potassium Test Strips

Sand Content Kit

## Services Supplied by Mudex

24 / 7 technical advice

Detailed Mud Programs for contract tendering

Easy to follow Mud programs for field crews

Basic, Intermediate and Advanced training for Field Crews, Supervisors and Management

On-site and Off-site mud engineering

On-site or Off-site basic training for field crews



## STRINGENT TESTING TO MAINTAIN QUALITY

Mudex products are superior for a reason: no matter how good our drilling fluid compositions are, we constantly aim to improve through investigation and testing at our research and development facility.

Drilling fluid tests are conducted both in the field and in our fully-equipped laboratory, allowing our team to evaluate the drilling mud characteristics, as well as potential performance limitations. Through stringent laboratory testing, Mudex are aided with integral knowledge in the process of fluid design as well as given greater capacity to sufficiently evaluate fluids and fluid behaviour in controlled environments when field-testing procedures are inconclusive. Some of the testing that we undertake emulates our field-testing methods, whereas others can only be performed in a laboratory environment.

Quality Assurance and Quality Control testing processes (QAQC) are fully undertaken at Mudex. When creating a custom drilling fluid product for a client, we work closely together to ensure that the materials we produce are both consistent and perform to the specified criteria. Regardless of the stage of development of our product – from raw materials, through to drilling mud mixes – we strive to satisfy our own high standard of in-house quality protocols, as well as that of our clients.

Our team at Mudex is highly qualified and experienced in the technical testing process of our products and use calibrated approaches, combined with state-of-the art equipment to ensure our products are meeting the mark.

**Our quality management system is certified to ISO 9001 by Bureau Veritas. Every batch of our products undergoes stringent QAQC testing to ensure that it meets our customers requirements.**



## AUSTRALIAN OWNED

Mudex is proudly certified Australian Owned and the majority of our products are Made in Australia

