IMDEX Drilling Optimisation

xFORM™

A new generation of multifunctional drilling fluids helping you drill to spec, on time, every time.

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Drilling optimisation

The need to improve productivity is critical as the cost of drilling increases due to higher operational standards, environmental restrictions and increased hole depths.

As specialists in drilling optimisation, Our vision is to ensure the execution of drilling programs to specification, on time, within budget and safely.

At IMDEX, we develop, manufacture, and supply a comprehensive range of quality drilling fluids and specialty products.

These products are complemented by our integrated range of equipment, designed to optimise your drilling operations and reduce environmental impact.

For over 40 years we have redefined the way drilling fluids, equipment, technology, and software are used, to ensure execution of drilling programs.

Our drilling optimisation solutions assist you to:

- Hit targets accurately
- Drill with precision and at speed
- Reduce down-time
- Maximise bit life
- Be safe and environmentally responsible
- Prevent hole loss and maximise core recovery
- Reduce site footprint
- Minimise site remediation and environmental management costs
- Deliver a cost-effective quality drilling program and have the data to back it up

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Multifunctional fluids

IMDEX's multifunctional fluids range; xFORM offers a simplified approach to optimal mud-program performance without the guesswork.

With our new line of multifunctional fluids you have the confidence that the ideal fluid for your drilling is always applied. It's a simple and efficient approach to optimal mud-program execution, where you get the best fluid to match the complexity of your drill site.

Our fluids deliver combinations of the following common functional needs:

- **Viscosity:** reduce common concerns including rod chatter
- **Hole cleaning:** clean cuttings away from the bit, lift cuttings to surface, suspend cutting in the drilling fluids
- **Fluid loss control:** keep fluid in the hole and reduce environmental impact
- **Lubrication:** reduce common concerns including torque and improving bit life
- **Encapsulation:** improve core recovery

xFORM™ functionality matrix

Powder Range

POWDER	Viscosity	Hole Cleaning	Fluid Loss Control	Lubrication	Encapsulation
xFORM D PRO	IN DEVELOPMENT – COMING SOON				
xFORM D+	●	●●	●●		

Liquid Range

LIQUID	Viscosity	Hole Cleaning	Fluid Loss Control	Lubrication	Encapsulation
xFORM L PRO	IN DEVELOPMENT – COMING SOON				
xFORM L+	●●	●●		●●	●

LEGEND

●●● HIGH
●● MEDIUM
● LOW

IMDEX™

Why choose multifunctional?

xFORM multifunctional fluids take the guesswork out of onsite preparations and execution.
You can trust that bringing the one fluid to site will deliver you the optimal mud-program.

- Simplify inventory management with a streamlined supply chain to support your next drill site.
- Reduce administrative paperwork with just one fluid to register for QHSE compliance and risk assessment.
- Trust in our lab developed and field-tested multifunctional formulas, backed by over 40 years of experience supporting drilling contractors to achieve optimal results.

Multifunctional fluids are vital to optimal drilling programs. Achieve better drilling outcomes when you use xFORM fluids.

Viscosity – The drilling fluids developed by IMDEX offer optimal viscosity, enabling stabilisation of the drill string centrally in the borehole. This reduces rod chatter and vibration, resulting in improved drilling efficiency and accuracy.

Hole cleaning – Effective hole cleaning is crucial for efficient drilling. IMDEX's drilling fluids have the ability to transport rock fragments (cuttings) from the drill hole.

Additionally, the right fluids can suspend drilled cuttings even when the drilling fluid is not in motion. This ensures the borehole remains clear, allowing for smoother drilling operations.

Fluid loss control – Fractured and porous formations are prone to fluid loss, where drilling fluid leaks into the surrounding geology. IMDEX's drilling fluids are designed to minimise fluid loss. By preventing excessive fluid loss, we can maintain stability of the formation around the drill hole.

Lubrication – IMDEX's drilling fluids offer lubrication properties that reduce friction and wear between surfaces. By minimising friction and wear, drill torque is reduced, leading to increased efficiency and improved equipment life.

Encapsulation – Drilling in poorly consolidated or water-sensitive geologies can cause structural degradation. IMDEX's drilling fluids incorporate formation stabilisers to preserve the structural integrity of the geology and its matrix during drilling. This helps minimise potential damage to the formation and ensures a more stable drilling environment.

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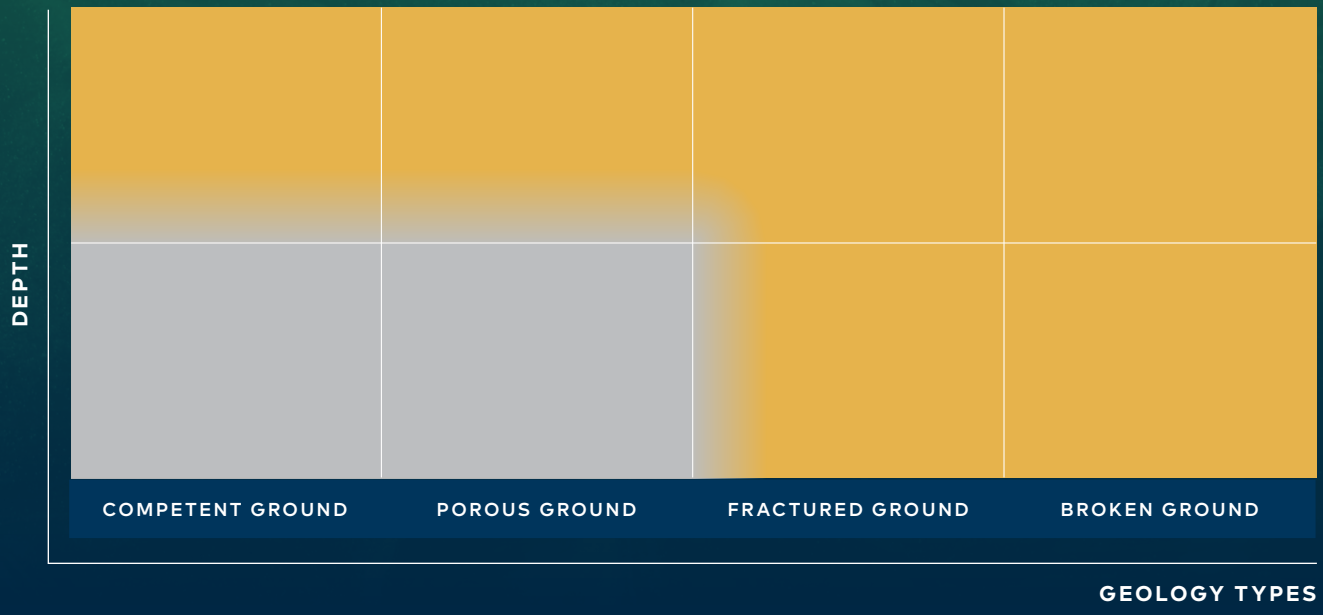
Fluid selection made easy

PRODUCT SELECTION TOOL

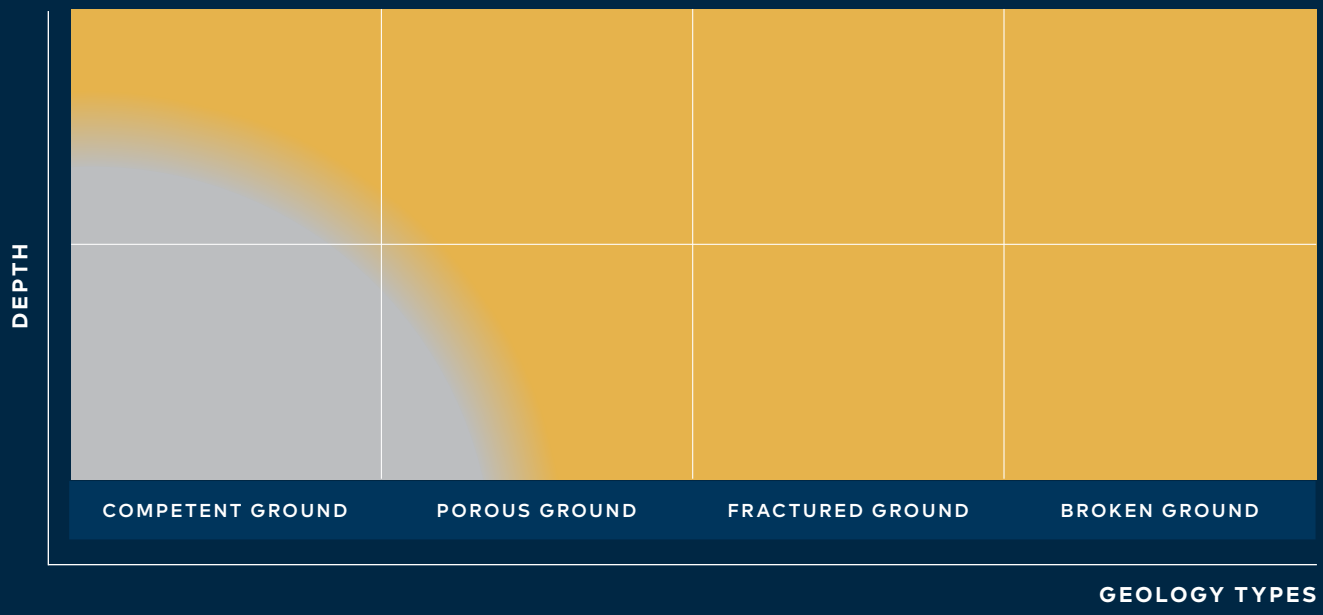
PREMIUM

HIGH PERFORMANCE (COMING SOON)

Powders



Liquids



Case Study #1 (Africa)

	RIG 1	RIG 2	MUD PROGRAM Per m3
Soda Ash	0.25kg	0.50kg	1kg
Viscosifier	1kg	4kg	4kg
Lubricant	4kg	1kg	4kg

- Both rigs are not using soda ash correctly
- RIG 1 likes seeing viscosity but neglects lubrication
- RIG 2 focusing on bit life, neglecting viscosity

Geology:
Hard, competent ground

Mud Program - Four additives:

- Soda ash
- x2 viscosifiers
- Lubricant

} **Changed to 1 multifunctional product (xFORM L+)**

Results:

- Elimination in the use of hazardous chemicals (soda ash)
- Elimination of petroleum hydrocarbons in drilling fluids
- 10% improvement to bit life
- 20% improvement to meters drilled per shift

Case Study #2 (USA)

	MUD PROGRAM Per 300 gal
Soda Ash	6lb
Bentonite	50lb
Fluid Loss	4lb
Encapsulator	2lb
Lubricant	0.5gal

Customer pain points:

- Very challenging drilling conditions
- Frequently lost holes and stuck rods
- Poor core recovery
- Significant time spent reaming

Mud Program - Five additives:

- Soda ash
- Bentonite
- Fluid loss polymer
- Encapsulator
- Lubricant

} **Changed to 1 multifunctional product* (xFORM D+)**
***premixed into vegetable oil**

Results:

- Core recovery over 95%, up from 40%
- 138% improvement in drill rates
- 44% decrease in time spent reaming
- 71% decrease in time spent tripping for bit
- 76% decrease in time spent with stuck rods

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Fluid concentrations preview

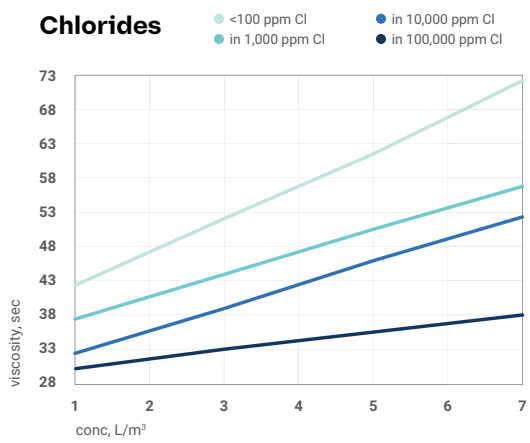
High Performance Liquid

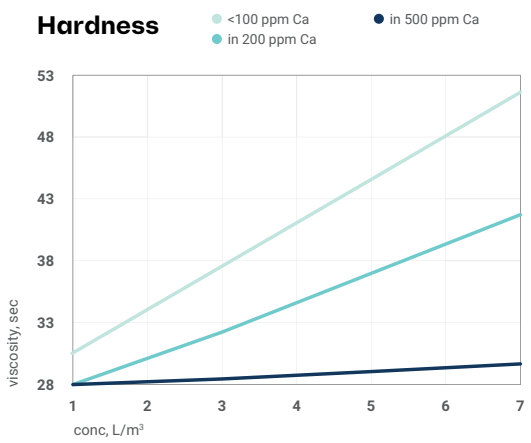
xFORM™ L PRO

IN DEVELOPMENT – COMING SOON

Premium Liquid

xFORM™ L+





High Performance Powder

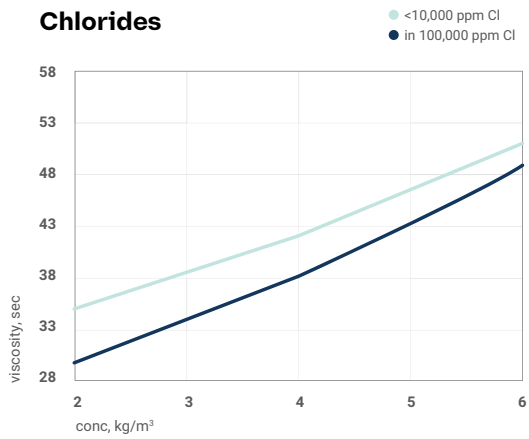
xFORM™ D PRO

IN DEVELOPMENT – COMING SOON

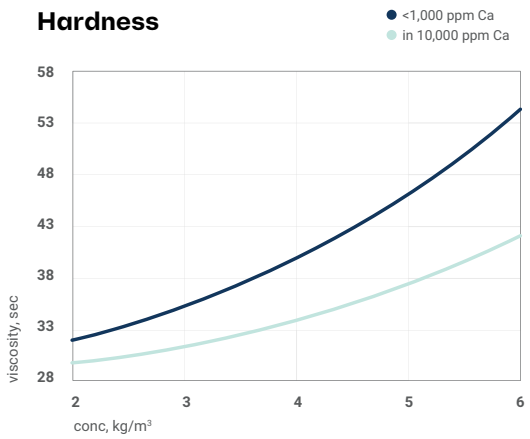
Premium Powder

xFORM™ D+

Chlorides



Hardness



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