



**AQUIND Limited**

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## **AQUIND INTERCONNECTOR**

Applicant's Response to the Examining Authority's  
Further Written Questions (ExQ2) – Appendix 5  
Material Datasheets for HDD Drilling Fluid  
(MG2.1.4)

The Infrastructure Planning (Examination Procedure) Rules 2010, Rule 8(1)(b)  
The Planning Act 2008

Document Ref: 7.4.3.5

PINS Ref.: EN020022

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**PINS REF.: EN020022**

**DOCUMENT: 7.4.3.5**

**DATE: 25 JANUARY 2021**

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## DOCUMENT

<b>Document</b>	<b>Appendix 5 - Material Datasheets for HDD Drilling Fluid (MG2.1.4)</b>
<b>Revision</b>	001
<b>Document Owner</b>	WSP UK Limited
<b>Prepared By</b>	J. Kaufmann
<b>Date</b>	25 January 2021
<b>Approved By</b>	J. Kaufmann
<b>Date</b>	25 January 2021

# COSHH Risk Assessment

<b>Product Name:</b>	Ultrabore
<b>Product ID:</b>	Drilling Fluid Additive

	1	2	3	4	5		<b>Severity</b>	<b>Likelihood</b>	<p><b>RISK MATRIX</b></p> <p>The control measures are to ensure that residual risks are reduced to a minimum.</p> <p>Where controls fail to reduce from high (red zone) refer risk assessment and safety methodology to your line manager/supervisor – do <b>NOT</b> Commence task.</p>	
1	1	2	3	4	5		No Injury	1		Almost Never
2	2	4	6	8	10		Minor Injury	2		Seldom
3	3	6	9	12	15		>7 Day Injury	3		Possible
4	4	8	12	16	20		Major Injury	4		Probable
5	5	10	15	20	25		Death	5		Frequently
1-7 (Low) 8-12 (Medium) 13-25 (High)							Severity x Likelihood = Risk Rating			

<b>High</b> <input type="checkbox"/>	<b>Medium</b> <input type="checkbox"/>	<b>Low</b> <input checked="" type="checkbox"/>
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<b>Task &amp; Product Use</b> (describe activity or work process and location:	Product used in drilling fluids to lubricate and cool the cutting tools, to remove cuttings, and to help prevent blowouts. Location: Drilling Site
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**Elimination**  
The use of this product and task cannot be fully eliminated.

**Substitution**  
This product has the lowest risk factor for the task and cannot be substituted for a product deemed to be of a lesser risk.

**Engineering controls**  
The only engineered approach will be to ensure this product is only used outdoors, noted that a dedicated supervisor will be in place for the task.

**Administrative Controls**  
A safety methodology will be in place for all drilling works, this will be briefed to all operatives and nominated supervisors. Drilling works will be monitored by a competent supervisor.

<b>Number of persons at risk:</b>	Employees (including trainees) <input checked="" type="checkbox"/>	Contractors <input type="checkbox"/>	Public (including visitors) <input type="checkbox"/>
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Classification (state the category of danger)

No hazard pictogram <input checked="" type="checkbox"/>	Hazard Statement: Not Classified as hazardous
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<input type="checkbox"/> Toxic	<input type="checkbox"/> Gas under pressure	<input type="checkbox"/> Flammable
<input type="checkbox"/> Serious health hazard	<input type="checkbox"/> Hazardous to the environment	<input type="checkbox"/> Explosive
<input type="checkbox"/> Health hazard/Hazardous to the ozone layer	<input type="checkbox"/> Oxidising	<input type="checkbox"/> Corrosive

**Hazard Type**

<input type="checkbox"/> Gas	<input type="checkbox"/> Vapour	<input type="checkbox"/> Mist	<input type="checkbox"/> Fume	<input checked="" type="checkbox"/> Dust	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other (State) _____
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**Route of Exposure**

<input checked="" type="checkbox"/> Inhalation	<input checked="" type="checkbox"/> Skin	<input checked="" type="checkbox"/> Eyes	<input type="checkbox"/> Ingestion	<input type="checkbox"/> Other (State) _____
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**Frequency & Duration of Exposure**

<b>Document Reference:</b> SAF-017	<b>Revision</b> 08	<b>Issue Date</b> 22/11/2018	<b>Page Number</b> 1 of 3
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Amount used: n/a      How many times per day: n/a      Duration: n/a

**Workplace Exposure Limits (WELs)** *please indicate n/a where not applicable*

Long term exposure- n/a      Short-term exposure level- n/a

**Health Monitoring**

Health Surveillance Required? No

Monitoring process whilst COSHH is in use? No

**State the Risks to Health from Identified Hazards**

**Ingestion-** Non toxic









**Eye Contact-** Causes irritation due to physical abrasion by dust particles

**Skin Contact-** Non-toxic, may cause skin dryness and chapping

**Inhalation-** Long term exposure to bentonite dust in excess of the OES limit may result in fibrosis of the lung tissue. The presence of respirable crystalline silica may lead to silicosis if the MEL is persistently exceeded over a long time.

**Personal Protective Equipment** *(state type and standard)*

No PPE required under intended use

 <input checked="" type="checkbox"/>	Dust masks	 <input type="checkbox"/>	
 <input type="checkbox"/>	Respirator	 <input checked="" type="checkbox"/>	Safety goggles
 <input checked="" type="checkbox"/>	Use barrier creams and rubber gloves	 <input checked="" type="checkbox"/>	Normal workwear- overalls
 <input type="checkbox"/>	Footwear	 <input checked="" type="checkbox"/>	Eyewash station Ensure adequate ventilation and dust control measures

**First Aid Measures**

**Inhalation-** Remove person to fresh air, if symptoms persist seek medical attention.

**Ingestion-** Drink several glasses of water or milk. If large quantities are ingested seek medical attention.

**Skin contact-** Rinse thoroughly with cold water and seek medical attention if symptoms persist.

**Eye contact-** Rinse thoroughly with cold water and seek medical attention if symptoms persist

**Storage**

**Handling** - Avoid the creation of dust, and ensure adequate ventilation at the point of use.

**Storage** - Store in a clean, dry environment away from oxidising agents.

**Disposal of Substances & Contaminated Containers**

Hazardous Waste     Skip     Return to Depot     Return to Supplier     Other (If Other Please State)

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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**Fire control & Spillage**

**Fire-** Non combustible, when extinguishing fires bare in mind product becomes slippery when wet.

**Spillage-** Do not breathe dust, product becomes slippery when wet. Sweep up or vacuum up and dispose of as nn-toxic waste.

Is exposure adequately controlled?

Yes

No

**Mixing Chemicals**

Is this chemical mixed with other substances during use? Yes, water and other drilling fluid additives.

Chemical/product name	Liquid/solid	R-phrases or H-Statements	Hazardous properties of the substance if mixed or activated by another substance or process

Any Additional Advice: N/A

**Risk Rating: Following Control Measures Within This Assessment**

High <input type="checkbox"/>	Medium <input type="checkbox"/>	Low <input checked="" type="checkbox"/>
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Project Name: \_\_\_\_\_ Line Manager: \_\_\_\_\_

Assessed by: Oliwia Wnek Date: 26/11/2018



## CLEAR SOLUTIONS

Performance Drilling Products  
The Earth Can Trust

**PRODUCT NAME:** Ultrabore®

**Safety Data Sheet No:** 5002EC

### 1. Identification of the Substances and Details of the Company

**Product Description:** Drilling Fluid Additive

**Company Name and Address:**

Clear Solutions International Ltd  
Unit B3, Wem Industrial Estate  
Soulton Road  
Wem  
Shropshire SY4 5SD  
UK

**Date Prepared:** August 2009

**Issue No:** 3

**Date Reviewed:** March 2016

**Tel:** +44 (0) 1939 235754

**Fax:** +44 (0) 1939 232399

**Email:** info@drilling-products.com

### 2. Hazards Identification

**Classification of the substance**

Classification Regulation (EC) No 1272/2008: not hazardous

Classification Directive 67/548/EEC, 1999/45/EC: not classified

**Label elements**

Labeling Regulation (EC) No 1272/2008: not classified

**Other hazards**

Not applicable

### 3. Composition/Information on Ingredients

**Substances**

Chemical nature: Naturally occurring mineral

CAS No. 1302-78-9

Consists mainly of montmorillinite with < 10% accessory minerals (quartz, feldspar, mica and calcite). Respirable Crystalline Silica (<7.1µ) may be present at <1% and therefore not classified as hazardous.

### 4. First Aid Measures

**Skin Contact:** Rinse thoroughly with cold water and seek medical attention if symptoms persist.

**Eye Contact:** Rinse thoroughly with cold water and seek medical attention if symptoms persist.

**Inhalation:** Remove person to fresh air, and if symptoms persist seek medical attention.

**Ingestion:** Drink several glasses of water or milk. If large quantities are ingested seek medical attention.

### 5. Fire Fighting Measures

**Non combustible** - when extinguishing fires bear in mind product becomes slippery when wet.

#### Clear Solutions Group of Companies

Unit B3, Wem Industrial Estate, Soulton Road, Wem, Shropshire SY4 5SD United Kingdom

T +44 (0) 1939 235 754 F +44 (0) 1939 232 399 E info@drilling-products.com W www.drilling-products.com

**PRODUCT NAME:** Ultrabore®

**Safety Data Sheet No:** 5002EC

## 6. Accidental Release Measures

**Personal precautions:** Do not breathe dust – see section 8. Becomes slippery when wet.

**Environmental risk:** Non-toxic.

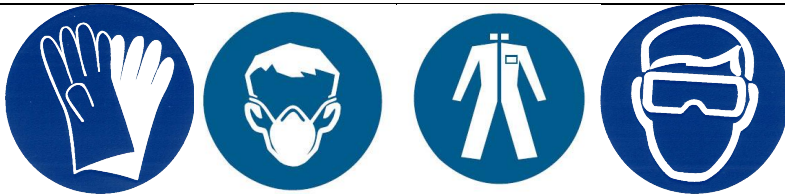
**Cleaning up:** Sweep or vacuum up and dispose of as non-toxic waste.

## 7. Handling and Storage

**Handling:** Avoid the creation of dust, and ensure adequate ventilation at point of use. See section 8.

**Storage:** Store in clean, dry environment.

## 8. Exposure Controls/Personal Protection



**Hand Protection:** Use barrier creams and rubber gloves as required.

**Skin Protection:** Normal work wear.

**Respiratory Protection:** Use dust masks. Ensure adequate ventilation and dust control measures to maintain dust levels below OES\* limit.

\*OES level (Occupational Exposure Standard): Dry bentonite is classed as a nuisance dust with an 8 hour TWA for total dust inhalation of 10mg/m<sup>3</sup> and 5 mg/m<sup>3</sup> for respirable dust. Quartz present in small quantities in this product has a Maximum Exposure Limit (MEL) of 0.4mg/m<sup>3</sup> respirable dust for an 8 hour TWA period. (Respirable dust is that portion with a particle size <7.1µ).

**Eye protection:** Wear safety glasses.

## 9. Physical and Chemical Properties

<b>Appearance:</b>	Light grey to off-white powder
<b>Odour:</b>	Odourless
<b>pH – 2% suspension:</b>	7 – 9.5
<b>S.G:</b>	2.5
<b>Solubility:</b>	Forms suspension in water
<b>Decomposition Temperature:</b>	Not Evaluated
<b>Flammability:</b>	Non-flammable
<b>Explosive properties:</b>	None
<b>Vapour pressure:</b>	N/A
<b>Flash point:</b>	N/A
<b>Melting point:</b>	N/A
<b>Boiling point:</b>	N/A

## 10. Stability and Reactivity

**Conditions to avoid:** Avoid generation of dust. Slippery when wet.

**Materials to avoid:** Oxidising agents.

**Hazardous Decomposition Products:** None.

## 11. Toxicological Information

**Ingestion:** Orally non-toxic.





**PRODUCT NAME:** Ultrabore®

**Safety Data Sheet No:** 5002EC

**Eye contact:** Causes irritation due to physical abrasion by dust particles.

**Eye contact:** Causes irritation due to physical abrasion by dust particles.

**Skin contact:** Non-toxic may cause skin dryness and chapping.

**Inhalation:** Long term exposure to bentonite dust in excess of the OES limit may result in fibrosis of the lung tissue. The presence of respirable crystalline silica may lead to silicosis if the MEL is persistently exceeded over a long time.

## 12. Ecological Information

### Toxicity

LC<sub>50</sub> (96hrs) Rainbow Trout: 16000 mg/l

LC<sub>50</sub> (24hrs) C. dubia and H. limbata: >500 mg/l

## 13. Disposal Considerations

Dispose of in accordance with local and national regulations using an approved disposal contractor.

## 14. Transport information

There are no specific transport precautions required as product is classified as not dangerous but product should be kept dry as it becomes slippery when wet and avoid dust creation.

## 15. Regulatory Information

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Dangerous Substances Directive 67/548/EEC and Dangerous Preparations Directive 88/379/EEC do not apply.

Follow safety guidelines S22 – do not breathe dust and use only in well-ventilated areas.

COSHH regulations 2002 apply in the UK.

## 16. Other Information

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Typical uses of this product are civil engineering, oil well drilling, ceramics, foundry applications, land fill barriers, bore hole sealing.

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*The information herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, CLEAR SOLUTIONS INTERNATIONAL LTD cannot give guarantees regarding information from other sources, and expressly does not make any warranties, nor assumes any liability, for its use.*

