

# SAFETY DATA SHEET

## 1. Identification

### Identification

**Product name:** OIL BASED MUD

### Additional identification

**Chemical name:** Mixture

### Recommended use and restriction on use

**Recommended use:** WEC Drilling  
**Restrictions on use:** None identified.

### Details of the supplier of the safety data sheet

#### Supplier

**Company Name:** INTEGRITY DELAWARE, LLC  
**Address:** 2710 EAST CORRAL  
KINGSVILLE, TX 78363  
US  
**Telephone:** (+1) 361 595 5561

### Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1) 7035273887

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Carcinogenicity	Category 2
Aspiration Hazard	Category 1

#### Unknown toxicity

Acute toxicity, oral	0.7 %
Acute toxicity, dermal	0.7 %
Acute toxicity, inhalation, vapor	53.2 %
Acute toxicity, inhalation, dust or mist	65.9 %

### Label Elements:

#### Hazard Symbol:



#### Signal Word:

Danger

**Hazard Statement:** Combustible liquid.  
Causes serious eye irritation.  
Suspected of causing cancer.  
May be fatal if swallowed and enters airways.

**Precautionary Statement:**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.

**Response:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If exposed or concerned: Get medical advice/attention. In case of fire: Use CO2, dry chemical or foam for extinction. Water can be used to cool and protect exposed material. Collect spillage.

**Storage:** Store in well-ventilated place. Keep cool. Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None identified.

**3. Composition/information on ingredients**

Chemical name	CAS number	Percent by Weight
Calcium chloride	10043-52-4	10 - 20%
Kerosene	64742-81-0	10 - 20%
Diesel fuel	68334-30-5	10 - 20%
Kerosene	8008-20-6	10 - 20%
Diesel fuel	68476-30-2	10 - 20%
Calcium hydroxide	1305-62-0	1 - 5%

**4. First-aid measures**

**General information:** IF exposed or concerned: Get medical advice/attention.

**Ingestion:** Do NOT induce vomiting. Aspiration of material due to vomiting can cause chemical pneumonitis which can be fatal. If vomiting occurs naturally, the casualty should lean forward to reduce the risk of aspiration. Rinse mouth. Immediately call a POISON CENTER/doctor.

**Inhalation:** Remove exposed person to fresh air if adverse effects are observed.

**Skin Contact:** Take off contaminated clothing and wash before re-use. Wash with soap and water. If skin irritation occurs, get medical attention.

**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Symptoms may be delayed.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Treat symptomatically.

**5. Fire-fighting measures**

**General Fire Hazards:** Move containers from fire area if you can do so without risk.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** CO<sub>2</sub>, Dry chemical or Foam. Water can be used to cool and protect exposed material.

**Unsuitable extinguishing media:** Not determined.

**Specific hazards arising from the chemical:** Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations. Vapors may travel considerable distance to a source of ignition and flash back. Water may cause splattering. Container may rupture on heating. When heated, hazardous gases may be released including: hydrogen chloride and chlorine. See section 10 for additional information.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** No data available.

**Special protective equipment for fire-fighters:** Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations.

**Methods and material for containment and cleaning up:** Eliminate all ignition sources if safe to do so. Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

**Environmental Precautions:** Avoid release to the environment. Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

## 7. Handling and storage

**Precautions for safe handling:** Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with eyes. Observe good industrial hygiene practices. Provide adequate ventilation. Use personal protective equipment as required. Wash hands thoroughly after handling. Launder contaminated clothing before reuse. Avoid environmental contamination.

**Maximum Handling Temperature:** Not determined.

**Conditions for safe storage, including any incompatibilities:** Keep cool. Store in a well-ventilated place. Do not store near potential sources of ignition.

**Maximum Storage Temperature:** Not determined.

## 8. Exposure controls/personal protection

### Control Parameters:

#### Occupational Exposure Limits

Chemical name	type	Exposure Limit Values	Source
Kerosene - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (02 2012)
Kerosene	REL	100 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Diesel fuel - Inhalable fraction and vapor. - as total hydrocarbons	TWA	100 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (02 2012)
Kerosene - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (02 2012)
Kerosene	REL	100 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Diesel fuel - Inhalable fraction and vapor. - as total hydrocarbons	TWA	100 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (02 2012)
Calcium hydroxide	TWA	5 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (02 2012)
Calcium hydroxide	REL	5 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Calcium hydroxide - Total dust.	PEL	15 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium hydroxide - Respirable fraction.	PEL	5 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

#### Other exposure limits

Chemical name	type	Exposure Limit Values	Source
Calcium chloride	TWA	10 mg/m <sup>3</sup>	

**Appropriate engineering controls:** No special requirements under ordinary conditions of use and with adequate ventilation.

**Individual protection measures, such as personal protective equipment**

- General information:** Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
- Eye/face protection:** Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.
- Skin Protection**
- Hand Protection:** Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water.
- Other:** Wear apron or protective clothing in case of contact.
- Respiratory Protection:** A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
- Hygiene measures:** Observe good industrial hygiene practices. Avoid contact with eyes. When using do not smoke. Wash hands before breaks and immediately after handling the product.

**9. Physical and chemical properties**

**Appearance**

- Physical state:** liquid
- Form:** liquid
- Color:** Brown, Black
- Odor:** Kerosene
- Odor threshold:** No data available.
- pH:** 10.5
- Freezing point:** No data available.
- Boiling Point:** > 250 °F (121 °C)
- Flash Point:** 150.1 °F (65.6 °C)
- Evaporation rate:** No data available.
- Flammability (solid, gas):** No data available.
- Upper/lower limit on flammability or explosive limits**
- Flammability limit - upper (%):** No data available.
- Flammability limit - lower (%):** No data available.
- Explosive limit - upper (%):** No data available.
- Explosive limit - lower (%):** No data available.
- Vapor pressure:** No data available.

<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	0.8 60.1 °F (15.6 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	partly soluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

**Other information**

<b>Bulk density:</b>	6.5 - 20 lb/gal
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## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Will not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames.
<b>Incompatible Materials:</b>	None known, avoid contact with reactive chemicals.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, hydrogen chloride, chlorinated compounds, and other products of incomplete combustion.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Ingestion:</b>	No data available.
<b>Skin Contact:</b>	Causes mild skin irritation.
<b>Eye contact:</b>	Causes serious eye irritation.

### Information on toxicological effects

#### Acute toxicity

##### Oral

Product:	Swallowing this material causes severe irritation and may cause burns of the mouth, esophagus and stomach, abdominal pain, nausea, vomiting and diarrhea. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death. ATEmix > 10,000 mg/kg.
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**Dermal**

Product: Not classified for acute toxicity based on available data.

**Inhalation**

Product: Avoid inhalation of mists or vapors. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor. High concentrations may cause headaches, dizziness, fatigue, nausea, vomiting, drowsiness, stupor, other central nervous system effects leading to visual impairment, respiratory failure, unconsciousness and death.  
Not classified for acute toxicity based on available data.

**Skin Corrosion/Irritation:**

Product: Prolonged or repeated contact as from clothing wet with the material may cause burns. Prolonged or excessive contact may result in blisters and burns. Prolonged and repeated exposure causes defatting and cracking of the skin. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.  
Remarks: Causes mild skin irritation.

**Serious Eye Damage/Eye Irritation:**

Product: Remarks: Causes serious eye irritation.

**Respiratory sensitization:**

No data available

**Skin sensitization:**

Kerosene (Supplier information) May cause skin sensitization in sensitive individuals.

Calcium hydroxide Classification: Not a skin sensitizer. (Literature)

**Specific Target Organ Toxicity - Single Exposure:**

Kerosene May cause irritation to the mucous membranes and upper respiratory tract.

Diesel fuel May cause irritation to the mucous membranes and upper respiratory tract.

Kerosene May cause respiratory irritation.

Diesel fuel May cause irritation to the mucous membranes and upper respiratory tract.

Calcium hydroxide May cause respiratory irritation.

**Aspiration Hazard:**

Product: May be fatal if swallowed and enters airways.

**Other effects:**

Kerosene Central Nervous System impairment Skin irritation Upper Respiratory Tract irritation

Kerosene

Skin Central nervous system

### **Chronic Effects**

#### **Carcinogenicity:**

Product:

Lifetime skin painting studies with products similar to kerosene have produced skin tumors or skin cancer in laboratory mice.

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Diesel fuel

Lifetime skin painting studies with products similar to kerosene have produced skin tumors or skin cancer in laboratory mice.

#### **IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

#### **US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

#### **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

#### **Germ Cell Mutagenicity:**

Calcium chloride

This material has not exhibited mutagenic or genotoxic potential in laboratory tests.

Kerosene

The American Petroleum Institute tested kerosene in several in vitro and in vivo genotoxicity assays. Although isolated assays gave a positive result there was generally no convincing evidence that kerosene is genotoxic.

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#### **Reproductive toxicity:**

Kerosene

Kerosene was shown to have no teratogenic activity in rats exposed by inhalation at 365 ppm in a study performed by the American Petroleum Institute.

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#### **Specific Target Organ Toxicity - Repeated Exposure:**

Kerosene

Unknown: Target Organ(s): Central nervous system., bone marrow, Kidney, Liver



Diesel fuel	Unknown: Target Organ(s): Kidney Repeated and prolonged overexposure to diesel fuel may cause degenerative changes in the liver, kidneys, and bone marrow.
Kerosene	Prolonged and repeated overexposure to kerosene and similar petroleum distillates may cause degenerative changes in the liver, kidneys, and bone marrow.
Diesel fuel	Unknown: Target Organ(s): Central nervous system.

## 12. Ecological information

### Ecotoxicity

#### Fish

Kerosene	LC 50 (Not reported, 4 d): > 100 mg/l
Kerosene	LC 50 (Golden Orfe, 4 d): > 100 mg/l
Calcium hydroxide	LC 50 (Rainbow Trout, 4 Days): 50.6 mg/l

#### Aquatic Invertebrates

Kerosene	EC 50 (Water flea (Daphnia magna), 2 d): > 1,000 mg/l
Calcium hydroxide	EC 50 (Water flea (Daphnia magna), 2 d): 49.1 mg/l EC 50 (Not reported, 14 d): > 158 mg/l NOEC (Not reported, 14 d): 32 mg/l

#### Toxicity to Aquatic Plants

Kerosene	EC 50 (Alga, 4 d): > 1,000 mg/l
Calcium hydroxide	EC 50 (Alga, 3 Days): 184 mg/l

#### Toxicity to soil dwelling organisms

No data available

#### Sediment Toxicity

No data available

#### Toxicity to Terrestrial Plants

No data available

#### Toxicity to Above-Ground Organisms

No data available

#### Toxicity to microorganisms

No data available

### Persistence and Degradability

#### Biodegradation

Kerosene	OECD TG 301 F, 63 %, 28 d, Readily biodegradable
Kerosene	OECD TG 301 F, 63 %, 28 d, Readily biodegradable

### Bioaccumulative Potential

#### Bioconcentration Factor (BCF)

No data available

**Partition Coefficient n-octanol / water (log Kow)**

No data available

**Mobility:**

No data available

**Other Adverse Effects:**

No data available.

**13. Disposal considerations**

**Disposal instructions:**

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

**Contaminated Packaging:**

Container packaging may exhibit hazards.

**14. Transport information**

**DOT**

Not Regulated

**IMDG**

Not Regulated

**IATA**  
Not Regulated

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**  
None known.

The DOT shipping information in this section is based on a bulk container. Please review the accompanying shipping papers for the correct shipping descriptions based the size of the package. Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. During transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4)**  
None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 311 Classifications**

Fire Hazard  
Immediate (Acute) Health Hazards  
Delayed (Chronic) Health Hazard

**SARA 302 Extremely Hazardous Substance**  
None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**  
None present or none present in regulated quantities.

**SARA 313 (TRI Reporting)**  
None present or none present in regulated quantities.

## US State Regulations

### US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Silicon dioxide	456.00PPM
Anthraquinone	7.00PPM
Naphthalene	2.00PPM

## Inventory Status

### Australia (AICS)

This product contains a substance that is not listed on the Australia Inventory of Chemical Substances.

### Canada (DSL/NDSL)

This material contains one or more components that are on the Non-Domestic Substances list (NDSL). This material or products containing this material may be exported to Canada in limited quantities.

### China (IECSC)

This product contains a substance that is not listed on the Chinese Inventory of Existing Chemical Substances (IECSC).

### European Union (REACH)

To obtain information on the REACH compliance status of this product, please e-mail REACH@SDSInquiries.com.

### Japan (ENCS)

This product contains a substance that is not listed on the Japanese Existing and New Chemical Substances (ENCS) list.

### Korea (ECL)

This product requires notification before sale in Korea.

### New Zealand (NZIoC)

This product requires notification before sale in New Zealand.

### Philippines (PICCS)

This product requires notification before sale in the Philippines.

### Switzerland (SWISS)

This product contains a substance that is not listed on the Switzerland Inventory of Notified New Substances.

### Taiwan (TCSCA)

May require notification before sale in Taiwan.

### United States (TSCA)

All components of this material are on the US TSCA Inventory.

*The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.*

**16. Other information, including date of preparation or last revision**

**HMIS Hazard ID**

<b>Health</b>	*	2
<b>Flammability</b>	2	
<b>Physical Hazards</b>	0	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

**Issue Date:** 03/24/2016  
**Version #:** 2.0  
**Source of information:** Internal company data and other publically available resources.  
**Further Information:** Contact supplier (see Section 1)  
**Disclaimer:** As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.