

# SAFETY DATA SHEET

## 1. Identification

### Identification

**Product name:** Z WA

### 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:** Horizon Mud Company  
**Address:** 500 W. Wall, Ste. 280  
Midland, TX 79701  
United States  
**Telephone:** Chemtrec 800-424-9300

### Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1) 7035273887

## 2. Hazard(s) identification

### Hazard Classification

#### Physical Hazards

Flammable liquids Category 4

#### Health Hazards

Serious Eye Damage/Eye Irritation Category 2B

Carcinogenicity Category 2

Aspiration Hazard Category 1

#### Unknown toxicity

Acute toxicity, oral 9.6 %

Acute toxicity, dermal 9.6 %

Acute toxicity, inhalation, vapor 87.7 %

Acute toxicity, inhalation, dust or mist 83.6 %

### Label Elements:

#### Hazard Symbol:



**Signal Word:**  
SDS\_US - Z WA

Danger

**Hazard Statement:** Combustible liquid.  
Causes 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.

**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 sulfonate	Confidential	5 - 10%
Diesel fuel	68334-30-5	5 - 10%
Diesel fuel	68476-30-2	5 - 10%
Kerosene	64742-81-0	5 - 10%
Kerosene	8008-20-6	5 - 10%
2-Ethylhexanol	104-76-7	1 - 5%
Anthraquinone	84-65-1	0.1 - 0.5%

**Trade secret information:** A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**4. First-aid measures**

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

<b>Ingestion:</b>	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/...
<b>Inhalation:</b>	Remove exposed person to fresh air if adverse effects are observed.
<b>Skin Contact:</b>	Take off contaminated clothing and wash before re-use. Wash with soap and water. If skin irritation occurs, get medical attention.
<b>Eye contact:</b>	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: sulfur dioxide. 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:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

**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)

**Appropriate engineering controls:** No special requirements under ordinary conditions of use and with adequate ventilation. Adequate ventilation should be provided so that exposure limits are not exceeded.

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

- General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.
- 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. Chemical resistant gloves
- Other:** Wear apron or protective clothing in case of contact. Chemical resistant boots. Gloves, coveralls, apron, boots as necessary to minimize 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. Use respirator if irritation is experienced or if the recommended exposure limit is exceeded. Use respirator with a combination organic vapor and dust/mist cartridge.
- Hygiene measures:** Observe good industrial hygiene practices. When using do not smoke. Wash hands before breaks and immediately after handling the product.

**9. Physical and chemical properties**

**Appearance**

- |  |                           |
|--|---------------------------|
| <b>Physical state:</b>                                       | liquid                    |
| <b>Form:</b>   | liquid                    |
| <b>Color:</b>  | Dark brown to black       |
| <b>Odor:</b>   | Hydrocarbon               |
| <b>Odor threshold:</b>                                       | No data available.        |
| <b>pH:</b>   | No data available.        |
| <b>Freezing point:</b>                                       | No data available.        |
| <b>Boiling Point:</b>  | 320 °F (160 °C)           |
| <b>Flash Point:</b>  | 158.9 °F (70.5 °C) (PMCC) |
| <b>Evaporation rate:</b>                                     | No data available.        |
| <b>Flammability (solid, gas):</b>                            | No data available.        |
| <b>Upper/lower limit on flammability or explosive limits</b> |                           |
| <b>Flammability limit - upper (%):</b>                       | No data available.        |
| <b>Flammability limit - lower (%):</b>                       | No data available.        |
| <b>Explosive limit - upper (%):</b>                          | No data available.        |
| <b>Explosive limit - lower (%):</b>                          | No data available.        |

<b>Vapor pressure:</b>	> 1.33 hPa
<b>Vapor density:</b>	29.92
<b>Relative density:</b>	0.92 60.1 °F (15.6 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Completely 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>	10.59 - 10.93 kg/m3
<b>Pour Point Temperature:</b>	< 50 °F (10 °C)

**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>	Reducing agents. Strong oxidizing agents. Strong alkalis.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, 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 eye irritation.

**Information on toxicological effects**

**Acute toxicity**

**Oral**

Product:	ATEmix > 10,000 mg/kg. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain. Ingestion can cause central nervous system effects such as headache, dizziness, drowsiness, and generalized weakness.
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**Dermal**

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

Product: ATEmix (, 4 h): 10 - 20 mg/l. Dusts, mists and fumes  
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.

**Skin Corrosion/Irritation:**

Product: Causes mild skin irritation.  
Remarks: Prolonged or repeated contact may cause irritation. 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.

**Serious Eye Damage/Eye Irritation:**

Product: Remarks: Causes eye irritation.

**Respiratory sensitization:**

No data available

**Skin sensitization:**

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

2-Ethylhexanol Classification: Not a skin sensitizer. (Literature)

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

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

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

Kerosene May cause respiratory irritation.

2-Ethylhexanol Respiratory tract 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. Butyl cellosolve: A National Toxicology Program (NTP) chronic inhalation study revealed some evidence of carcinogenic activity in male and female mice, equivocal evidence in female rats. and no evidence in male rats.
Diesel fuel	Lifetime skin painting studies with products similar to kerosene have produced skin tumors or skin cancer in laboratory mice.
Kerosene	Lifetime skin painting studies with products similar to kerosene have produced skin tumors or skin cancer in laboratory mice.
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### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Anthraquinone	Overall evaluation: 2B. Possibly carcinogenic to humans.
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### 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:

2-Ethylhexanol	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.
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.



2-Ethylhexanol

No evidence of adverse effects were found in a developmental toxicity study of 2-ethylhexanol in rats. Doses up to 3 ml/kg applied to the skin during the most critical part of the gestation period produced evidence of toxicity to mothers, but no evidence of injury in the developing offspring. In a previous study, birth defects were observed by oral administration, an unlikely route of exposure in the workplace.

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

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.
Diesel fuel	Unknown: Target Organ(s): Central nervous system.
Kerosene	Unknown: Target Organ(s): Central nervous system., bone marrow, Kidney, Liver
Kerosene	Prolonged and repeated overexposure to kerosene and similar petroleum distillates may cause degenerative changes in the liver, kidneys, and bone marrow.
2-Ethylhexanol	Repeated overexposure may result in liver and kidney damage. A 14-day dermal toxicity study of 2-ethylhexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides. Unknown: Target Organ(s): Blood, Liver, Spleen., Kidney

**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
2-Ethylhexanol	LC 50 (Fathead Minnow, 4 d): 28.2 mg/l LC 50 (Golden Orfe, 4 d): 17.1 mg/l NOEC (Golden Orfe, 4 d): 14 mg/l

**Aquatic Invertebrates**

Kerosene	EC 50 (Water flea (Daphnia magna), 2 d): > 1,000 mg/l
2-Ethylhexanol	EC 50 (Water flea (Daphnia magna), 2 d): 39 mg/l

**Toxicity to Aquatic Plants**

Kerosene	EC 50 (Alga, 4 d): > 1,000 mg/l
2-Ethylhexanol	EC 50 (Green algae (Scenedesmus quadricauda), 3 d): 16.6 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**

2-Ethylhexanol EC 50 (Pseudomonas putida, 0.1 d): 540 mg/l  
EC 50 (Sludge, 0.5 d): > 100 mg/l

**Persistence and Degradability**

**Biodegradation**

Kerosene OECD TG 301 F, 63 %, 28 d, Readily biodegradable  
Kerosene OECD TG 301 F, 63 %, 28 d, Readily biodegradable  
2-Ethylhexanol OECD TG 302 B, 95 %, 5 d, Readily biodegradable  
OECD TG 301 C, 100 %, 14 d, Readily biodegradable

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

2-Ethylhexanol Bioconcentration Factor (BCF): 25.35 (calculated)

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

2-Ethylhexanol Log Kow: 2.9 (Measured)

**Mobility:**

2-Ethylhexanol soil - 1.42

**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**

UN Number:	NA 1993
UN Proper Shipping Name:	Combustible liquid, n.o.s.(Kerosene, Diesel fuel)
Transport Hazard Class(es)	
Class:	CBL
Label(s):	NONE
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	None established

**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)**

Chemical Identity

Anthraquinone

Reportable quantity

De minimis concentration: 0.1%

**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**

<u>Chemical Identity</u>	<u>CAS number</u>	<u>Percent by Weight</u>	<u>Reportable quantity</u>
Butyl cellosolve	111-76-2	0.4 %	*See regulation for further details
Diethylene glycol monobutyl ether	112-34-5	0.4 %	*See regulation for further details

\*These specific chemicals are not listed please check the generic entries on the SARA 304 listings for applicability.

**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.

Anthraquinone

0.103%

Naphthalene

821.00PPB

**Inventory Status**

**Australia (AICS)**

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

**Canada (DSL/NDSL)**

All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

**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)**

This product requires 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.*

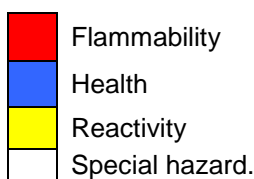
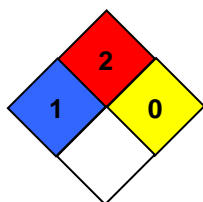
**16. Other information, including date of preparation or last revision**

**HMIS Hazard ID**

<b>Health</b>	*	1
<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.