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## TREAT - O – CLA CONC

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### GENERAL INFORMATION

- Potassium chloride (KCl) is generally used as a two (2) percent concentration although it is common to use much higher concentrations depending on the clay content and the clay characteristics.
- A two (2) percent solution requires approximately 714 pounds of KCl per 100 barrels of water (about 14 to 15 fifty (50) pound bags or 13 twenty five (25) kilogram bags).
- In order to obtain the equivalent performance of KCl, four (4) gallons of **TREAT-O-CLA CONC** are used per 100 barrels of water or per every 714 pounds of KCl. TWO drums of **TREAT-O-CLA CONC** will replace about 20,000 pounds of KCl or 400 fifty-pound bags.
- The amount of KCl used is also dependent (or should be) on the purity of the KCl. This factor is all too often overlooked when mixing KCl to the required concentration.
- Large costs savings can be generated when using **TREAT-O-CLA CONC** in replacing KCl in terms of freight savings, warehousing, inventory, blending manpower costs, on-the-fly savings when local water sources are available, maintenance costs savings on equipment such as pumps due to damage caused by various granular materials in the KCl.
- As far as savings obtained when using **TREAT-O-CLA CONC** in the EXPORT MARKET, the same savings seen in paragraph # 5 will be realized but greater savings due to ocean transport costs will be obtained. Approximately FOUR drums of **TREAT-O-CLA CONC** will replace a 40-foot container of KCl. These savings sometimes amount to more than the cost of the product.
- In AIR DRILLING (water misting/air mixtures) consumption of surfactants necessary for the required foaming characteristics and stability can be substantially reduced due to the inherent foaming properties built into the **TREAT-O-CLA A.D.**
- With a specific gravity close to that of water, heavier brine solutions (using fresh or salt waters) can be formulated using heavier salts without causing precipitation of the salts to include KCl while getting the necessary clay stabilization.
- In general, based on costs in the U.S. and Canada, using **TREAT-O-CLA** should result in savings of approximately 63% up and above the previously described savings in paragraphs # 5 and # 6.

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# TREAT - O - CLA

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## PRODUCT DATA SHEET

### GENERAL CHARACTERISTICS:

Liquid substitute for potassium chloride (KCl)

### DESCRIPTION AND USES:

- Prevents clay swelling and migration
- Used with water, brines, acids and drilling fluids
- Compatible with gels, crosslinkers and breakers
- Will not adversely effect fluid pH
- Superior performance at lower costs than KCl
- Minimizes waste disposal problems
- Can be mixed on-the-fly
- Can be ionically altered
- No Inorganic chlorides
- Extremely low freeze point
- Low surface tension
- Slightly cationic
- Eliminates storage problems
- Exceeds KCl performance as per CST and REVERSE PERMEABILITY testing
- Use in preflush fluids and all completion fluids

### METHODS OF APPLICATION:

- TREAT-O-CLA CONC can be mixed with water or other process and treatment fluids in a tank truck, blend or storage tank or on the fly.
  - 1GAL TREAT-O-CLA CONC per 1000 gallons water
  - 4 GAL TREAT-O-CLA CONC per 100 barrels water(Mixing charts available upon requests.)

### PHYSICAL PROPERTIES:

|                  |                            |
|------------------|----------------------------|
| APPEARANCE       | CLEAR TO LIGHT AMBER FLUID |
| SPECIFIC GRAVITY | 1.103                      |
| LBS./GAL         | 9.2                        |
| FREEZE POINT     | -20 deg. F                 |
| WATER ABSORPTION | COMPLETE                   |
| ACID ABSORPTION  | COMPLETE                   |
| FLASH POINT      | >200 F (TCC)               |

### SHIPPING AND HANDLING:

TREAT-O-CLA CONC is shipped in bulk, 55-gallon drums, and in 5-gallon pails.  
A TREAT-O-CLA CONC material safety data sheet is available upon request.

# TREAT - O – CLA CONC A.D. MIXING CHART

## DSC TREAT O CLA MIXING INSTRUCTIONS

REVISED 5-20-10

| BBLs | 2 % KCL | 3% KCL | 4% KCL | 6% KCL | 8% KCL | 24% KCL |
|------|---------|--------|--------|--------|--------|---------|
| 1000 | 40      | 60     | 80     | 120    | 160    | 480     |
| 750  | 30      | 46     | 60     | 90     | 120    | 360     |
| 500  | 20      | 30     | 40     | 60     | 80     | 240     |
| 300  | 12      | 18     | 24     | 36     | 48     | 144     |
| 210  | 8.4     | 12.6   | 16.8   | 25     | 33     | 101     |
| 175  | 7       | 10.5   | 14     | 21     | 28     | 84      |
| 150  | 6       | 9      | 12     | 18     | 24     | 72      |
| 140  | 6       | 8.6    | 11     | 17     | 22     | 67      |
| 130  | 5       | 8      | 10.4   | 15.6   | 21     | 62      |
| 120  | 4.8     | 7.2    | 9.6    | 14.4   | 19.2   | 57.6    |
| 110  | 4.4     | 6.8    | 9      | 13.2   | 17.6   | 52.8    |
| 100  | 4       | 6      | 8      | 12     | 16     | 48      |
| 80   | 3.2     | 4.8    | 6.4    | 10     | 12.8   | 38      |
| 75   | 3       | 4.5    | 6      | 9      | 12     | 36      |
| 50   | 2       | 3      | 4      | 6      | 8      | 24      |
| 40   | 1.6     | 2.4    | 3      | 5      | 6.4    | 19.2    |
| 30   | 1.2     | 1.8    | 2.4    | 3.6    | 4.8    | 14      |
| 25   | 1       | 1.5    | 2      | 3      | 4      | 12      |
| BBLs | 2 % KCL | 3% KCL | 4% KCL | 6% KCL | 8% KCL | 24% KCL |

PERCENTAGE OF DSC TREAT O CLA IN GALLONS

REVISED 5-20-10

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## **TREAT - O – CLA CONC**

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### **FIELD CONCENTRATION TESTING**

- A color strip is available to TREAT-O-CLA users that will confirm the exact concentration of TREAT-O-CLA in your water or fluids in less than one minute with a great deal of accuracy. This test is used in the field as well as in the lab where the time is not available to run a long QAS Chemical Test.
- A reading of 470 PPM on the color strip is the equivalent to 4 gallons of TREAT-O-CLA CONC. per 100 barrels of water or 1 gallon TREAT-O-CLA CONC. per 1000 gallons of water.

**TEST PROCEDURES ARE INCLUDED IN THE FOLLOWING PAGES.**

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## TREAT - O – CLA CONC

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### TEST PROCEDURE / ACTIVITY TEST

#### FIELD TEST:

In general, TREAT-O-CLA CONC. will be used at the recommended rate of 1 gallon per 1000 gallons water. This ratio will give you a usage concentration of approximately 0.450% to 0.475 % or 450 to 475 PPM.

- Mix at the rates given above. This can be done in the frac tank, tank truck, etc.
- Take a 1 to 2 inch test strip provided by your supplier and dip into the blended liquid for approximately 30 seconds.
- The strip color should change from yellow to a green color shade and when compared to the kit color chart will show you the TREAT-O-CLA concentration. The reading should be between the 400-600 ppm indicator.
- This will be the equivalent of a 2% KCl solution.

#### DEMONSTRATION TEST:

This test procedure is used to compare your TREAT-O-CLA CONC as you receive the product for inventory or to compare the concentration of a competitive product of like chemical composition to verify that a competitor is not cheaper because of lesser activity and lower concentration of active blended components. This is a quality control test as well as a sales tool used for a customer demonstration.

- Take a sample of TREAT-O-CLA or any like or equivalent product from storage tank or drum.
- Put 8 oz. (250 mL) water in a small jar or container.
- Pipette 500 PPM (0.05%) or 0.125 mL of TREAT-O-CLA CONC. or 1,000 ppm (0.1%) or 0.25 mL or TREAT-O-CLA FG into the 250 mL sample of water.
- Shake combined fluids.
- Dip test strip for 30 seconds and compare color to chart for concentration reading.
- Should read between 400-600 ppm to equate to a 2% KCl concentration.

#### MATERIALS REQUIRED:

pHydrion QUAT CHEK 1000 Paper kit.  
PIPETTE 0-1 mL.  
OPEN MOUTH JAR OR SUITABLE CONTAINER.

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## TREAT - O – CLA CONC

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### TESTING

The chemistry used in the manufacture of TREAT-O-CLA has been under development for several years. It is presently widely used in all applications that require Potassium Chloride salt as well as other liquid replacements of a variety of chemical compositions. The chemistry is based on a large number of various molecular weight QAS materials as well as other chemical compounds, which give TREAT-O-CLA its unique properties. TREAT-O-CLA and its related chemistry have been widely tested by a great number of oil and service companies, both in-house research and development organizations as well as by well-known independent and major analytical laboratories.

#### THE TESTS HAVE BEEN CATERGORIZED AS FOLLOWS:

Capillary Suction Time Test  
Advanced Rock Property Studies (Permeability Testing)  
Chemical and Biological Testing

#### CAPILLARY SUCTION TIME TEST

Following is a partial list of formations that have been tested by use of the CST Test. Many more have been tested both in the U.S. and internationally.

- |                                |                                      |
|--------------------------------|--------------------------------------|
| 1. Almond bar Sand             | 16. Puloxy                           |
| 2. Coal Shale                  | 17. Queens                           |
| 3. Canyon Sand                 | 18. Red Fork                         |
| 4. Codel                       | 19. Sansinena                        |
| 5. Cotton Valley               | 20. Shale                            |
| 6. Diatomite                   | 21. Silica Sand                      |
| 7. Glorietta                   | 22. Sussex                           |
| 8. Grayburg                    | 23. Travis peak                      |
| 9. Lab Prepared Standard Cores | 24. Upper Morrow Conglomerate        |
| 10. New Mexico Sandstone       | 25. Upper Morrow Shale               |
| 11. Lower San Andreas          | 26. Upper Morrow Sandstone           |
| 12. N-Grieve Wyoming           | 27. Viking Formation                 |
| 13. Natrona-B                  | 28. Woodbine                         |
| 14. Phosphoria                 | 29. Wyoming Uranium Mining Formation |
| 15. Pico Sandstone             |                                      |

As a whole, the TREAT-O-CLA chemistry will outperform untreated water, Potassium Chloride (KCl), and competitive liquid products on a basis of both clay stabilization and treatment cost.

**NOTE: Please see the included SPE # 19432 paper in this section as well as the CST Procedure.**



## PERMEABILITY TESTING

Advanced rock property studies to include Permeability to different brines and competitive product performance on various given specific formation cores have been performed as a function of throughput using TREAT-O-CLA chemistry over the last several years. The TREAT-O-CLA chemistry has always performed extremely well as compared to Potassium Chloride (KCl) and other competing chemistries. This performance was based on both efficiency/damage considerations as well as on a cost/performance basis.

Some of the formations where permeability testing was performed include the following:

- Wilcox Formation
- Diatomite Formation
- Lab. Control Standard Cores
- Tensleep Formation

Liquid permeability studies were conducted by using established procedures by both major laboratories as well as individual major oil companies. Specifically designed tests have also been run by independent laboratories at the request of various oil/service companies. In general, these tests indicate that using TREAT-O-CLA will result in minimally equivalent performance to KCl in terms of minimizing damage and increasing permeability of the formation. TREAT-O-CLA will perform superior to most competitive liquid products and minimally equivalent to the remaining products.

**Note:** Additional information on permeability testing is available in this section.

## CHEMICAL/BIOLOGICAL TESTING

**CORROSION RATE DETERMINATION:** The specific QAS chemistry used in the manufacturing of TREAT-O-CLA demonstrates a lower weight loss as well as a lower corrosion rate than the equivalent KCl concentrations. 2.0% and 3.0% KCl result in a 30.0 mg and 30.5 mg weight loss respectively and an 18.5 MPY and 18.8 MPY respectively. The equivalent 500 ppm (2% KCl equivalent) and a 750 ppm (3% KCl equivalent) have a 28.2 mg and 28.3 mg weight loss and a 17.4 MPY and 17.5 MPY respectively.

**COMPATIBILITY TESTING:** Laboratory tests performed by service companies as well as oil companies and chemical polymer manufactures confirm that TREAT-O-CLA is compatible with all systems either tested or used in actual field operations.

**ACUTE TOXICITY:** The 96 hour toxicity test using Mysidopsis Bahia using QAS chemistry in a #7 generic drilling fluid resulted in an LC50, ppm greater than 1,000,000.

**CHLORIDE TESTING:** At 500 ppm (equivalent to 2% KCl) total chloride is 18 mg/L of which total organic chloride is 0.15 mg/L.

## TREAT - O – CLA CONC. TEST FORMATIONS

| Formation       | De-Ionized Water | 2% KCl      | 125 PPM TOC CHEM | 250 PPM TOC CHEM | 500 PPM TOC CHEM |
|-----------------|------------------|-------------|------------------|------------------|------------------|
| Almond Bar Sand |                  |             |                  |                  |                  |
| #1              | 70               | 14          | 16               | 13               | 15               |
| Almond Bar Sand |                  |             |                  |                  |                  |
| # 2             | 126              | 39          | 89               | 52               | 37               |
| Almond Bar Sand |                  |             |                  |                  |                  |
| #3              | 70               | 14          | 14               | 13               | 15               |
| Almond Bar Sand |                  |             |                  |                  |                  |
| #4              | 126              | 39          | 53               | 52               | 37               |
| Viking          | 391              | 83 (2% KCl) |                  | 77               | 72               |
|                 |                  | 81 (3% KCl) |                  |                  | 49 (750 PPM)     |
| Viking # 1      | 412              | 78          |                  |                  | 69               |
|                 |                  | 82 (3% KCl) |                  |                  | 39 (750 PPM)     |
| Viking # 2      | 386              | 91          |                  |                  | 76               |
|                 |                  | 85 (3% KCl) |                  |                  | 59 (750 PPM)     |
| Viking # 3      | 304              | 65          |                  |                  | 26               |
|                 |                  | 69 (3% KCl) |                  |                  | 21 (750 PPM)     |
| Viking # 4      | 294              | 71          |                  |                  | 30               |
|                 |                  | 66 (3% KCl) |                  |                  | 24 (750 PPM)     |
| Sweetwater, WY. | 165              | 5           |                  | 4                | 2                |
| Phosphoria      | 52               | 51          | 45               |                  | 58               |

Notes on liquid permeability testing based on Advanced Rock Property Studies.

Permeability studies comparing Treat-O-Cla Conc. with KCl and TMAC have been performed by various oil companies and generally conclude that Treat-O-Cla when established as a base permeability, produces a better permeability result than the KCl permeability. The reverse is also true when KCl is established as the base permeability. It performs generally as well and has definite advantages on both performance and cost/performance studies when compared to TMAC.



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**TREAT-O-CLA CONC.**

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**Technical Data Sheet****General Characteristics**

**Treat-O-CLA Concentrate** liquid substitute for potassium chloride (KCl).

**Description and Uses:**

- Prevents clay swelling and migration
- Used with water, brines, acids and drilling fluids
- Compatible with gels, crosslinkers and breakers
- Will not adversely effect fluid pH
- Superior performance at lower costs than KCl
- Minimizes waste disposal problems
- Can be mixed on-the-fly
- Can be ionically altered
- No inorganic chlorides
- Extremely low freeze point
- Low surface tension
- Slightly cationic
- Eliminates storage problems
- Exceeds KCl performance as per CST and REVERSE PERMEABILITY testing
- Use in preflush fluids and all completion fluids

**Methods of Application:**

Treat-O-Cl<sub>a</sub> Concentrate can be mixed with water or other process and treatment fluids in a tank truck, blend or storage tank or on the fly.

1 GAL Treat-O-Cl<sub>a</sub> Concentrate per 1,000 Gal water  
4 GAL Treat-O-Cl<sub>a</sub> Concentrate per 100 barrels water  
(mixing charts available upon request)

**Physical Properties:**

|                  |                            |
|------------------|----------------------------|
| Appearance       | Clear to light amber fluid |
| Specific Gravity | 1.103                      |
| LBS/GAL          | 9.2                        |
| Freeze Point     | -20 deg F                  |
| Water Absorption | Complete                   |
| Acid Absorption  | Complete                   |
| Flash Point      | >200 F (TCC)               |

**Shipping and Handling:**

Treat-O-Cl<sub>a</sub> Concentrate is shipped in bulk, 55 gallon drums, and 5 gallon pails.



## MATERIAL SAFETY DATA SHEET

### SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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- **Product name:** TREAT-O-CLA CONC.
- **Product Description:** Liquid clay stabilizer.
- **Manufacturer:** Deep South Chemical, Inc.  
229 Millstone Road  
Broussard, LA 70518 (337) 837-9931
- **For Emergency: Call CHEMTREC 1-800-424-9300 Outside the U.S.A. (703)-527-3887**
- **Contact Person:** Glenn Ray
- **Formula:** Proprietary
- **MSDS Revised:** May 20, 2010

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

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Substances classified under CHIP

| Hazardous components<br>(None) | CAS Number | % | PEL(OSHA) |      | TLV(ACGIH) |      | IDLH |
|--------------------------------|------------|---|-----------|------|------------|------|------|
|                                |            |   | TWA       | STEL | TWA        | STEL |      |
|                                |            |   |           |      |            |      |      |

### SECTION 3. HAZARDS IDENTIFICATION, INCLUDING EMERGENCY OVERVIEW

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#### Effects of overexposure

**Inhalation:** This product may cause irritation to nose, throat, and respiratory tract

**Skin Contact:** This product may cause irritation to the skin. Defatting of the skin can occur with frequent or long-term skin contact.

**Eye Contact:** Irritation to eyes.

**Ingestion:** There may be irritation of the mouth, throat, and digestive tract.

### SECTION 4. FIRST AID MEASURES

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**Eyes:** Move victim away from exposure and into fresh air. If irritation persists, seek medical attention. For direct exposure, flush with clean water for 15 minutes. Hold eyelids apart to ensure flushing of the entire eye surface.

**Inhalation:** Move victim away from source of exposure and into fresh air. If irritation persists, seek medical attention. If victim is not breathing, artificial respiration should be administered.

**Skin:** Remove contaminated clothes. Cleanse affected area thoroughly with soap and water. If irritation persists, seek medical attention. Wash contaminated clothing.

**Ingestion:** Drink plenty water. Seek medical attention.

### SECTION 5. FIRE FIGHTING MEASURES

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**Flash Point:** >325 °F TCC

#### Fire fighting measures

**Extinguishing Media:** While this product will not normally support combustion the use of water fog, dry chemical, foam, carbon dioxide or other extinguishing agent suitable for Class B fires is recommended. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly crench the burning material.

**Unusual Fire And Explosion Hazards:** May evolve CO, CO<sup>2</sup> and/or NO<sub>x</sub> under fire conditions. Containers exposed in a fire should be cooled with water to prevent vapor pressure buildup leading to rupture.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

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**Steps to be taken if material is released or spilled:** Use proper personal protective equipment. Stay upwind and away from spill. Keep all sources of ignition and hot metal surfaces away from spill. If spill is indoors, ventilate area. Keep out of drains, sewers or waterways. Use sand or other inert material to contain and soak up spill.

**Waste disposal method:** Dispose of according to local, state and federal regulations in an approved disposal facility or recycling facility.

**SECTION 7. HANDLING AND STORAGE**

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**Storage:** Store in a well-ventilated area. Keep container tightly closed when not in use. Store in cool, dry area. Keep away from sources of ignition.

**Handling:** Use proper personal protective equipment. Avoid contact with skin or eyes. Avoid breathing of vapors. Handle in well-ventilated workspace. When handling do not eat, drink, or smoke.

**Other precautions:** Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks or other sources of ignition.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Ventilation:** Keep work area well ventilated.

**Protective clothing:** Impermeable gloves and impervious clothing as appropriate.

**Eye protection:** Chemical goggles where splashing may occur.

**Respiratory Protection:** Use appropriate respiratory protection when handling or in case of insufficient ventilation.

**Special Protection:** Safety shower, eye bath, and washing facilities should be available.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Specific gravity @ 60°F(H<sub>2</sub>O = 1):** 1.103

**Flash Point(TCC Method)(°F):** >200

**Vapor density (Air = 1):** >1.0

**Solubility:** Soluble in water.

**Vapor pressure @ 100°F :** 5 mmHg

**Evaporation Rate:** N/D

**Appearance:** Straw colored liquid.

**Odor:** Mild

**Boiling Point(°F) :** 220

**pH:** 6.5-8.0

**Density @ 60 °F :** 9.20 lbs/gal

**Freezing Point (°F) :** < -20

**SECTION 10. STABILITY AND REACTIVITY**

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**Stability and Reactivity:** Stable in normal conditions.

**Incompatible Materials:** Isolate from strong oxidizers such as permanganates, chlorates and peroxides.

**Hazardous Decomposition Products:** Elemental oxides.

**Conditions to Avoid:** Heat, sparks, sources of ignition.

**Hazardous Polymerization:** Will not occur.



**SECTION 11. TOXICOLOGICAL INFORMATION**

| Chemical | LD50 dermal | LD50 oral | LC50 inhalation |
|----------|-------------|-----------|-----------------|
| (none)   |             |           |                 |

**Medical Condition Aggravated:** Exposure may adversely affect people with chronic disease of the respiratory system, skin and/or eyes, liver or kidneys.  
**Chronic Effects:** Prolonged or repeated exposure may result in central nervous system damage, blindness, and damage to the pancreas, liver, or kidneys or possible death.  
**Ingestion:** Can be fatal if swallowed. Can cause blindness, narcosis, nausea, burning pain in mouth, throat, abdomen, severe swelling of larynx, skeletal muscle paralysis affecting ability to breath, circulatory shock, and convulsions. Can not be made non-poisonous.  
**Eyes:** Product mist will cause irritation and a burning sensation.  
**Skin (Dermal):** May be absorbed causing toxic effects (see ingestion above).  
**Listed Carcinogens:** None listed.

**SECTION 12. ECOLOGICAL INFORMATION**

If released into the environment, see CERCLA in Section 15.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal:** If spilled, dispose according to local regulations. Recycle waste containers and clean out residues.  
**Statutory Notification Required:** None in UK.

**SECTION 14. TRANSPORT INFORMATION**

**Transport Information (Drum):** DOT-Non Regulated  
**Transport Information (Bulk):** DOT-Non Regulated

**SECTION 15. REGULATORY INFORMATION**

**Toxic Substances Control Act (TCSA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

**CERCLA RQ-40 CFR 302.4(a)**  
Reportable Quantity--None

**SARA 302 Components-40 CFR 355 Appendix A**  
None

**Section 311/312 Hazard Class-40 CFR 370.2**

|                            |        |
|----------------------------|--------|
| Immediate                  | (None) |
| Delayed                    | (None) |
| Fire                       | (None) |
| Reactive                   | (None) |
| Sudden Release of Pressure | (None) |

**SARA 313-40 CFR 372.65**

| <u>Component</u> | <u>CAS Number</u> |
|------------------|-------------------|
| (None)           |                   |



## **SECTION 16. OTHER INFORMATION**

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**NFPA RATING: Health (1) Fire (0) Reactivity (0)**

WE CANNOT ANTICIPATE ALL CONDITIONS UNDER WHICH THIS INFORMATION AND OUR PRODUCTS, OR THE PRODUCTS OF OTHER MANUFACTURERS IN COMBINATION WITH OUR PRODUCTS MAY BE USED. WE ACCEPT NO RESPONSIBILITY FOR RESULTS OBTAINED BY THE APPLICATION OF THIS INFORMATION OR THE SAFETY AND SUITABILITY OF OUR PRODUCTS, EITHER ALONE OR IN COMBINATION WITH OTHER PRODUCTS. USERS ARE ADVISED TO MAKE THEIR OWN TESTS TO DETERMINE THE SAFETY AND SUITABILITY OF EACH PRODUCT OR PRODUCT COMBINATION FOR THEIR OWN PURPOSES. UNLESS OTHERWISE OBTAINED IN WRITING, WE SELL THE PRODUCTS WITHOUT WARRANTY, AND BUYERS AND USERS ASSUME ALL RESPONSIBILITY AND LIABILITY FOR LOSS OR DAMAGE ARISING FROM HANDLING AND USE OF OUR PRODUCTS, WHETHER USED ALONE OR IN COMBINATION WITH OTHER PRODUCTS.

N/D= No data; N/A = Not available; N/E= Not established