

# BELLAIRE OIL COMPANY

June 13, 2016

RECEIVED

JUN 20 2016

RWCCB-CVR  
FRESNO, CALIF.

Ron Holcomb  
Central Valley Water Board  
1685 E Street  
Fresno, CA 93706

Mr. Holcomb:

Per the document sent to Bellaire Oil Company dated 5/2/2016 regarding produced water the chemicals used in said water at Kern Front.

In the mentioned time interval of January 2014-Present, Bellaire Oil Company has produced a total of 18,487,563 barrels of water out of the Kern Front Field. This volume is broken down by month in the attached table (Page 2)

During said time of January 2014 until Present, Bellaire Oil Company has used a total of 10 chemicals to treat the 18,487,563 barrels of produced water. The chemicals used in this process are attached in a table (Pages 3-7) and sorted by individual chemical used, and by date in which they were obtained and used by Bellaire. In this table, the information provided is as follows: the location, the vendor used to purchase the chemicals, the date of the purchase and use, a description of the chemical, the product name/number, and the volume (gal) of chemical used. The totals of all of the chemicals used are summed on the final table (Page 8).

All of the recurring chemicals listed (organic coagulant (approximately 4gal/day), demulsifier (approximately 2gal/day), water clarifier (approximately 5gal/day), and scale inhibitor (approximately 15gal/day)) are introduced into the water through Bellaire's entire system (header assemblies, to the tank farm, to the wimco). The other chemicals listed were pertaining to workover procedures in isolated well cases.

Please contact us if we can provide any further information to the Board.

Best Regards,



Carl Dean  
President  
Bellaire Oil Company

<b>Bellaire Oil Company- Kern Front- Water Production</b>		
<b>MONTH / YEAR</b>		<b>MONTHLY WATER VOLUME</b>
Jan-14		787,702
Feb-14		629,653
Mar-14		557,335
Apr-14		588,395
May-14		771,529
Jun-14		577,036
Jul-14		790,434
Aug-14		636,840
Sep-14		636,840
Oct-14		796,050
Nov-14		576,762
Dec-14		572,730
<b>TOTAL WATER 2014</b>		<b>7,921,306</b>
Jan-15		743,264
Feb-15		589,429
Mar-15		581,211
Apr-15		721,055
May-15		604,424
Jun-15		606,795
Jul-15		757,123
Aug-15		601,985
Sep-15		616,608
Oct-15		703,214
Nov-15		674,718
Dec-15		773,834
<b>TOTAL WATER 2015</b>		<b>7,973,660</b>
Jan-16		636,912
Feb-16		606,524
Mar-16		744,174
Apr-16		604,987
May-16		-
Jun-16		-
Jul-16		-
Aug-16		-
Sep-16		-
Oct-16		-
Nov-16		-
Dec-16		-
<b>TOTAL WATER 2016</b>		<b>2,592,597</b>

**ITEMIZED CHEMICAL USAGE FOR KERN FRONT**

<b>LOCATION</b>	<b>VENDOR</b>	<b>DATE</b>	<b>DESCRIPTION</b>	<b>PRODUCT NAME</b>	<b>VOLUME (gal)</b>
Kern Front	Amber Chemical Inc.	3/31/2014	Polymer	Amber 1200	2715
Kern Front	Amber Chemical Inc.	3/31/2014	Water Treatment	Sodium Hypochlorite 12.5%	26
Kern Front	Baker Petrolite	1/23/2014	Organic Coagulant	BPW76450-10	110
Kern Front	Baker Petrolite	2/28/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	4/3/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	4/17/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	5/16/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	6/11/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	7/7/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	8/15/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	9/4/2014	Organic Coagulant	BPW76450-10	30
Kern Front	Baker Petrolite	9/12/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	9/25/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	10/3/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	10/17/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	11/14/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	12/5/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	12/31/2014	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	1/26/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	2/13/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	3/27/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	3/27/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	4/17/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	5/1/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	5/21/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	6/12/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	7/10/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	8/7/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	9/4/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	9/25/2015	Organic Coagulant	BPW76450-10	55

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Kern Front	Baker Petrolite	11/5/2015	Organic Coagulant	BPW76450-10	110
Kern Front	Baker Petrolite	12/22/2015	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	1/14/2016	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	2/11/2016	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	3/11/2016	Organic Coagulant	BPW76450-10	55
Kern Front	Baker Petrolite	2/6/2014	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	3/27/2014	Demulsifier	Tretolite DMO7040-00	70
Kern Front	Baker Petrolite	6/11/2014	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	7/17/2014	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	8/28/2014	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	10/3/2014	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	12/5/2014	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	2/12/2015	Demulsifier	Tretolite DMO7040-00	65
Kern Front	Baker Petrolite	5/21/2015	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	7/7/2015	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	9/3/2015	Demulsifier	Tretolite DMO7040-00	110
Kern Front	Baker Petrolite	11/20/2015	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	2/11/2016	Demulsifier	Tretolite DMO7040-00	55
Kern Front	Baker Petrolite	1/23/2014	Water Clarifier	Tretolite RBW301X-00	110
Kern Front	Baker Petrolite	2/27/2014	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	3/27/2014	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	4/17/2014	Water Clarifier	Tretolite RBW301X-00	110
Kern Front	Baker Petrolite	5/15/2014	Water Clarifier	Tretolite RBW301X-00	90
Kern Front	Baker Petrolite	6/20/2014	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	7/3/2014	Water Clarifier	Tretolite RBW301X-00	70
Kern Front	Baker Petrolite	7/17/2014	Water Clarifier	Tretolite RBW301X-00	70
Kern Front	Baker Petrolite	8/15/2014	Water Clarifier	Tretolite RBW301X-00	70
Kern Front	Baker Petrolite	8/25/2014	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	10/3/2014	Water Clarifier	Tretolite RBW301X-00	115
Kern Front	Baker Petrolite	10/17/2014	Water Clarifier	Tretolite RBW301X-00	70
Kern Front	Baker Petrolite	11/14/2014	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	12/5/2014	Water Clarifier	Tretolite RBW301X-00	75
Kern Front	Baker Petrolite	12/31/2014	Water Clarifier	Tretolite RBW301X-00	80
Kern Front	Baker Petrolite	1/26/2015	Water Clarifier	Tretolite RBW301X-00	55

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Kern Front	Baker Petrolite	2/12/2015	Water Clarifier	Tretolite RBW301X-00	70
Kern Front	Baker Petrolite	3/12/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	3/27/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	4/24/2015	Water Clarifier	Tretolite RBW301X-00	100
Kern Front	Baker Petrolite	5/1/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	5/21/2015	Water Clarifier	Tretolite RBW301X-00	65
Kern Front	Baker Petrolite	6/17/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	6/17/2015	Water Clarifier	Tretolite RBW301X-00	90
Kern Front	Baker Petrolite	7/24/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	8/13/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	9/3/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	9/24/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	10/13/2015	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	10/28/2015	Water Clarifier	Tretolite RBW301X-00	110
Kern Front	Baker Petrolite	12/4/2015	Water Clarifier	Tretolite RBW301X-00	90
Kern Front	Baker Petrolite	12/22/2015	Water Clarifier	Tretolite RBW301X-00	75
Kern Front	Baker Petrolite	1/14/2016	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	2/12/2016	Water Clarifier	Tretolite RBW301X-00	70
Kern Front	Baker Petrolite	3/11/2016	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Baker Petrolite	3/28/2016	Water Clarifier	Tretolite RBW301X-00	55
Kern Front	Tri-Chemicals	2/19/2015	Dispersant	340	25
Kern Front	Tri-Chemicals	7/16/2015	Hi Temp Scale Inhibitor	ATMP Scale Inhibitor	55
Kern Front	Tri-Chemicals	12/31/2015	Clay Stabilizer - #5-3	Clay Stabilizer	220
Kern Front	Tri-Chemicals	5/20/2014	Oxygen Scavenger	Dissolved Oxygen Scav	55
Kern Front	Tri-Chemicals	2/19/2015	Oxygen Scavenger	Dissolved Oxygen Scav	55
Kern Front	Tri-Chemicals	7/2/2015	Oxygen Scavenger	Dissolved Oxygen Scav	55
Kern Front	Tri-Chemicals	11/10/2015	Oxygen Scavenger	Dissolved Oxygen Scav	55
Kern Front	Tri-Chemicals	1/18/2014	Water Scale Inhibitor	Phosphonate Scale Inhib	110
Kern Front	Tri-Chemicals	1/18/2014	Water Scale Inhibitor	Phosphonate Scale Inhib	110
Kern Front	Tri-Chemicals	2/19/2014	Water Scale Inhibitor	Phosphonate Scale Inhib	110
Kern Front	Tri-Chemicals	2/19/2014	Water Scale Inhibitor	Phosphonate Scale Inhib	110
Kern Front	Tri-Chemicals	3/23/2014	Water Scale Inhibitor	Phosphonate Scale Inhib	110
Kern Front	Tri-Chemicals	3/23/2014	Water Scale Inhibitor	Phosphonate Scale Inhib	110
Kern Front	Tri-Chemicals	4/3/2014	Water Scale Inhibitor	Phosphonate Scale Inhib	110

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Kern Front	Tri-Chemicals	8/19/2015	Water Scale Inhibitor	Phosponate Scale Inhib	125
Kern Front	Tri-Chemicals	9/2/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	9/2/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	9/28/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	10/13/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	10/25/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	11/10/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	11/30/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	12/15/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	12/31/2015	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	1/15/2016	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	1/30/2016	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	2/14/2016	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	2/29/2016	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	3/11/2016	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	3/24/2016	Water Scale Inhibitor	Phosponate Scale Inhib	110
Kern Front	Tri-Chemicals	4/4/2016	Water Scale Inhibitor	Phosponate Scale Inhib	110

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**CHEMICAL TOTALS FOR KERN FRONT**

<b>LOCATION</b>	<b>TIME INTERVAL OF CHEMICAL USAGE</b>	<b>CHEMICAL DESCRIPTION</b>	<b>CHEMICAL NAME</b>	<b>TOTAL VOLUME (GAL)</b>
Kern Front	January 2014-May 2016	Polymer	Amber 1200	2715
Kern Front	January 2014-May 2016	Water Treatment	Sodium Hypochlorite 12.5%	26
Kern Front	January 2014-May 2016	Organic Coagulant	BPW76450-10	1900
Kern Front	January 2014-May 2016	Demulsifier	Tretolite DMO7040-00	795
Kern Front	January 2014-May 2016	Water Clarifier	Tretolite RBW301X-00	2520
Kern Front	January 2014-May 2016	Dispersant	340	25
Kern Front	January 2014-May 2016	Hi Temp Scale Inhibitor	ATMP Scale Inhibitor	55
Kern Front	January 2014-May 2016	Clay Stabilizer - #5-3	Clay Stabilizer	220
Kern Front	January 2014-May 2016	Oxygen Scavenger	Dissolved Oxygen Scav	220
Kern Front	January 2014-May 2016	Water Scale Inhibitor	Phosphonate Scale Inhib	6395

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# **B**ELLAIRE OIL COMPANY

6/29/16

Ronald Holcomb  
Central Valley Water Board  
1685 E Street  
Fresno, CA 93706

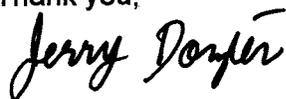
Mr. Holcomb:

This document is an addendum to our letter of June 13, 2016, to you regarding our "Certification" statement as described in the 13267 Order:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact us if we can provide any further information to the Board.

Thank you,



Jerry Dozier  
California Manager  
Bellaire Oil Company  
661-333-0289



# Material Safety Data Sheet

## Sodium Hypochlorite 12.5 wt%

Revision Date 1/30/12

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Sodium Hypochlorite 12.5 wt%  
 Product code : 105004  
 MSDS Number : 10000032  
 Synonyms : Sodium Hypochlorite - 18, Hypo, Liquid Bleach, Bleach, Hypochlorite, Liquid Chlorine Solution, Javel Water  
 Chemical Family : Hypochlorite  
 Molecular formula : NaOCl  
 Product Use Description : Swimming pool chlorinator, hard surface cleaner, mildicide, Water treatment chemical, Biocides, bleach solutions and bleach fixer solutions

Company : Amber Chemical Inc.  
 5201 Boylan St.  
 Bakersfield, CA 93308  
 (661)325-2072

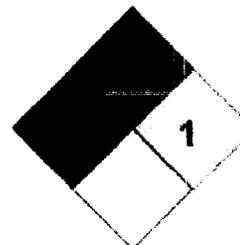
Emergency Phone Number : **US: 1-800-424-9300 - CHEMTREC**

### SECTION 2. HAZARDS IDENTIFICATION

**HMS Classification** : Health Hazard: 3  
 Flammability: 0  
 Physical hazards: 2

HMIS	
	3
	0
	2

**NFPA Classification** : Health Hazard: 3  
 Fire Hazard: 0  
 Reactivity Hazard: 1



#### Emergency Overview

**OSHA Hazards** : OXIDIZER, UNSTABLE (REACTIVE), CORROSIVE  
 Immediately Dangerous to Life or Health : Not established for the product.

#### Potential Health Effects

**Primary Routes of Entry** : Ingestion, Eyes, Inhalation, Skin Absorption  
**Aggravated Medical Condition** : Asthma, Heart disease, Respiratory disorder  
**Inhalation** : Inhalation of vapors is irritating to the respiratory system, may cause throat pain and cough.  
 Inhalation of aerosol may cause irritation to the upper respiratory tract.  
 Higher exposure may cause lung edema, circulatory collapse and unconsciousness.

# Material Safety Data Sheet

## Sodium Hypochlorite 12.5 wt%

- Skin** : May cause skin irritation and/or dermatitis.  
Prolonged skin exposure may cause destruction of the dermis with impairment of the skin to regenerate at site of contact.
- Eyes** : Causes serious eye irritation.  
Blurred vision  
May cause impairment of vision and corneal damage
- Ingestion** : Ingestion or inhalation of high concentrations may cause injuries to gastrointestinal tract, liver, kidneys and central nervous system.  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
- Chronic Exposure** : Repeated inhalation exposure may cause impairment of lung function and permanent lung damage.  
Effects from chronic skin exposure would be similar to those from single exposure except for effects secondary to tissue destruction.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous components

Component	CAS-No.	Weight %
sodium hypochlorite	7681-52-9	10.00 - 20.00
sodium hydroxide	1310-73-2	1.00 - 5.00

### SECTION 4. FIRST AID MEASURES

#### First aid procedures

- Eye contact** : • IMMEDIATELY flush eyes with plenty of water holding eyelids apart for at least 15-20 minutes  
• Get medical attention IMMEDIATELY.
- Skin contact** : • Take off contaminated clothing.  
• Rinse skin immediately with plenty of water for 15-20 minutes.  
• Call a poison control center or doctor for treatment advice.
- Ingestion** : • Call a poison control center or doctor immediately for treatment advice.  
• Have person sip a glass of water if able to swallow.  
• Do not induce vomiting unless told to do so by the poison control center or doctor.  
• Do not give anything by mouth to an unconscious person.
- Inhalation** : • Move person to fresh air.

## Material Safety Data Sheet

### Sodium Hypochlorite 12.5 wt%

- General advice** :
- If breathing is difficult oxygen may be beneficial if administered by trained personnel.
  - If breathing has stopped, apply artificial respiration.
  - Call a physician or poison control center **IMMEDIATELY**.
- Notes to physician**
- Comments** :
- Have the product container or label with you when calling a poison control center or doctor or going for treatment.
  - Show this safety data sheet to the doctor in attendance.
- Comments** :
- Probable mucosal damage may contraindicate the use of gastric lavage.

#### SECTION 5. FIRE-FIGHTING MEASURES

##### Flammable properties

- Flash point : not applicable  
Lower explosion limit : not applicable  
Upper explosion limit : not applicable

##### Fire fighting

- Suitable extinguishing media** :
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
  - On small fire, use dry chemical, carbon dioxide or water spray.
  - On large fires, use water in flooding quantities as fog.
- Unsuitable extinguishing media** :
- Do not use Mono Ammonium Phosphate (MAP) type extinguishers directly on this product
- Further information** :
- Cool containers / tanks with water spray.

##### Protective equipment and precautions for firefighters

- Specific hazards during fire fighting** :
- Corrosive
- Special protective equipment for fire-fighters** :
- Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to: boots gloves, hard hat, splash-proof goggles, full face shield and impervious clothing, i.e. chemically impermeable suit.
  - Compatible materials for response to this material are neoprene and butyl rubber.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** :
- Restrict access to affected area.
  - Use personal protective equipment.
  - Use NIOSH approved respiratory protection.
  - Keep people away from and upwind of spill/leak.
- Methods for containment / Methods for cleaning up** :
- Try to prevent the material from entering drains or water courses.
  - Prevent further leakage or spillage if safe to do so.

# Material Safety Data Sheet

## Sodium Hypochlorite 12.5 wt%

Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.  
Will form hazardous reaction products  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a suitable container for disposal according to local / state / province/national regulations (see section 13).

**Additional advice** : • Dispose of as hazardous waste in compliance with local, province, state and federal regulations.  
• You are requested to contact the emergency numbers listed below before beginning any such operation.

FOR ALL ACCIDENTS, CALL CHEMTREC AT 800-424-9300

### SECTION 7. HANDLING AND STORAGE

#### Handling

**Handling** : Personnel working with this chemical should be trained on its hazards.  
Avoid contact with skin and eyes.  
Do not ingest.  
Avoid inhalation of vapor or mist.  
Wear personal protective equipment.  
For personal protection see section 8.

**Advice on protection against fire and explosion** : Normal measures for preventive fire protection.

#### Storage

**Requirements for storage areas and containers** : Do not freeze.  
Store in a cool and shaded area.  
Keep in a well-ventilated place.  
To maintain product quality, do not store in heat or direct sunlight.  
Decomposition rate increases as it is heated.  
Keep in properly labeled containers.  
Keep container closed when not in use.

**Store at temperatures not exceeding** : 86 F (30 C)

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure Guidelines

##### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
sodium hydroxide	1310-73-2	CEIL	2 mg/m3	1994-09-01	ACGIH
		TWA	2 mg/m3	1993-06-30	OSHA P1

# Material Safety Data Sheet

## Sodium Hypochlorite 12.5 wt%

### Engineering measures

Engineering measures : Use local exhaust ventilation to maintain levels to below the PEL.

### Personal protective equipment

Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location. Chemical resistant goggles must be worn.

Skin and body protection : Boots. Full protective suit. Wear protective gloves.

Respiratory protection : Sudden release of chlorine hazard. If air concentrations above the PEL are possible, wear a NIOSH approved respirator. Wear respiratory equipment when entering the spray area.

Hygiene measures : • General industrial hygiene practice.

### Suitable material

#### Boots.

- Neoprene
- butyl-rubber
- PVC
- Viton<sup>®</sup>
- Saranex<sup>®</sup>

#### Gloves

- Neoprene
- butyl-rubber
- PVC
- Viton<sup>®</sup>
- Saranex<sup>®</sup>

#### Protective suit

- Neoprene
- butyl-rubber
- PVC
- Viton<sup>®</sup>
- Saranex<sup>®</sup>

The listed materials are guidelines only and there are numerous PPE alternatives depending on the site specifics of where the chemical is used. You should always consult with your PPE supplier for the correct tested material.

**Before using this chemical you should be aware of its hazards and be knowledgeable of emergency procedures in the event of a spill.**

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form : liquid  
Color : yellow to yellowish green  
Odor : pungent

### Safety data

Flash point : not applicable  
Lower explosion limit : not applicable  
Upper explosion limit : not applicable  
Autoignition temperature : not applicable  
Molecular Weight : 74.5 g/mol  
pH : 12 - 14 at 77 F (25 C)  
Freezing point : -17 F (-27 C) 16% Solution  
Boiling point/boiling range : Decomposes on heating.  
Vapor pressure : 12 mmHg at 68 F (20 C) 12.5% Solution  
Bulk density : not applicable  
Water solubility : completely miscible  
Evaporation rate : no data available

## SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : • High heat, sunlight and ultra-violet light

Materials to avoid : • Oxidizing agents, Acids, Nitrogen containing organics, Metals, Iron, Copper, Nickel, Cobalt, Organic materials, Ammonia

## Material Safety Data Sheet

### Sodium Hypochlorite 12.5 wt%

Hazardous decomposition products	: Decomposition will result in the formation of oxygen from contact with copper, nickel, cobalt and iron solids such as rust. Decomposition rate increases as it is heated. May develop chlorine if mixed with acidic solutions.
Thermal decomposition	: Decomposition rate increases as it is heated.
Hazardous polymerization	: Does not occur.

#### SECTION 11. TOXICOLOGICAL INFORMATION

##### Human Threshold Response

Odor threshold	: approximately 0.9 mg/m <sup>3</sup> (0.3 ppm) pungent
Irritation Threshold	: no data available
Immediately Dangerous to Life or Health	: Not established for the product.

##### Animal Toxicology

Acute oral toxicity	: LD50 rat Dose: 3 - 5 g/kg
Acute dermal toxicity	: LD50 rabbit Dose: > 2 g/kg
Acute inhalation toxicity	: LC50 no data available

#### SECTION 12. ECOLOGICAL INFORMATION

Acute Fish toxicity	: LC50 Bluegill sunfish: 2.90 mg/L Exposure time: 96 Hour
	LC50 Pimephales promelas (fathead minnow): 1.40 mg/L Exposure time: 96 Hour
	LC50 Oncorhynchus mykiss (rainbow trout): 0.90 mg/L Exposure time: 0.5 Hour

#### SECTION 13. DISPOSAL CONSIDERATIONS

Waste Classification	: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following: D002
Further information	: <ul style="list-style-type: none"><li>• If this product becomes a hazardous waste, it will be a hazardous waste which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly.</li><li>• Dispose of as hazardous waste in compliance with local, province, state and federal regulations.</li></ul>

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL.

# Material Safety Data Sheet

## Sodium Hypochlorite 12.5 wt%

RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, PROVINCE, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NON HAZARDOUS WASTES.

### SECTION 14. TRANSPORT INFORMATION

<b>DOT</b>	Proper shipping name	: Hypochlorite Solutions
	UN-Number	: UN1791
	Class	: 8
	Packing group	: III
	Hazard Labels/Placard	: 8
	Emergency Response	: 154
	Guidebook Number	
	Reportable Quantity	: 100 LB (Per 49 CFR 172.101, Appendix)
<b>TDG CLR</b>	Proper shipping name	: Hypochlorite Solutions
	UN-Number	: UN1791
	Class	: 8
	Packing group	: III
	Hazard Labels/Placard	: 8
<b>IATA</b>	UN-Number	: UN1791
	Description of the goods	: Hypochlorite Solutions
	Class	: 8
	Packaging group	: III
	ICAO-Labels	: 8
<b>IMDG</b>	UN-Number	: UN1791
	Description of the goods	: Hypochlorite Solutions
	Class	: 8
	Packaging group	: III
	IMDG-Labels	: 8
	Marine pollutant	: no

See regulations for further information.

FOR ALL ACCIDENTS, CALL CHEMTREC AT 800-424-9300

### SECTION 15. REGULATORY INFORMATION

#### CANADIAN CLASSIFICATION

**WHMIS Classification** : E Corrosive Material

**NPRI Components** : Hypochlorous acid, sodium salt 7681-52-9  
Sodium hydroxide (Na(OH)) 1310-73-2

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

#### US CLASSIFICATION

**OSHA Hazards** : Oxidizer, Unstable (reactive), Corrosive

# Material Safety Data Sheet

## Sodium Hypochlorite 12.5 wt%

**CERCLA** : 100 lbs

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard  
Reactivity Hazard

### EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### US STATE REGULATIONS

**Massachusetts Right To Know Components** : Hypochlorous acid, sodium salt 7681-52-9  
1991-07-01

Sodium hydroxide (Na(OH)) 1310-73-2  
1991-07-01

**Pennsylvania Right To Know Components** : Hypochlorous acid, sodium salt 7681-52-9  
1991-07-01

Sodium hydroxide (Na(OH)) 1310-73-2  
1991-07-01

Sodium chloride (NaCl) 7647-14-5

Water 7732-18-5

Carbonic acid disodium salt 497-19-8

**New Jersey Right To Know Components** : Water 7732-18-5

Hypochlorous acid, sodium salt 7681-52-9  
1991-07-01

Sodium chloride (NaCl) 7647-14-5

Sodium hydroxide (Na(OH)) 1310-73-2  
1991-07-01

**California Prop 65 Components** : This product is not listed, but it may contain elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. For additional information, contact Olin Technical Services (800-299-6546).

### GLOBAL INVENTORIES

The components of this product are reported in the following inventories:

**EINECS** On the inventory, or in compliance with the inventory

# Material Safety Data Sheet

## Sodium Hypochlorite 12.5 wt%

<b>TSCA</b>	On TSCA Inventory
<b>AICS</b>	On the inventory, or in compliance with the inventory
<b>DSL</b>	All components of this product are on the Canadian DSL list.
<b>ENCS</b>	On the inventory, or in compliance with the inventory
<b>KECI</b>	On the inventory, or in compliance with the inventory
<b>PICCS</b>	On the inventory, or in compliance with the inventory
<b>IECSC</b>	On the inventory, or in compliance with the inventory
<b>NZIoC</b>	On the inventory, or in compliance with the inventory

### SECTION 16. OTHER INFORMATION

#### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



## **SAFETY DATA SHEET**

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, ACCIDENT CALL CHEMTREC-DAY OR NIGHT  
1-800-424-9300**

### **SECTION 1: CHEMICAL PRODUCT & COMPANY INFORMATION**

**PRODUCT NAME:** AMBER 1200

**COMPANY NAME:** Amber Chemical Inc.  
**ADDRESS:** 5201 Boylan Street  
Bakersfield, CA 93308

**PHONE:** (661) 325-2072

**DATE PREPARED:** OCTOBER, 2013

### **SECTION 2: HAZARDS IDENTIFICATION**

**Spills produce extremely slippery surfaces.**

### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**IDENTIFICATION OF THE PREPARATION: Anionic water-soluble polymer in emulsion**

#### SECTION 4: FIRST AID MEASURES

**INHALATION:** Move to fresh air.

**SKIN CONTACT:** Wash off immediately with soap and plenty of water. In case of persistent skin irritation, consult a physician.

**EYE CONTACT:** Rinse thoroughly with plenty of water, also under the eyelids. In case of persistent eye irritation, consult a physician.

**INGESTION:** The product is not considered toxic based on studies on laboratory animals.

#### SECTION 5: FIRE FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Water, water spray, foam, dry powder, carbon dioxide (CO<sub>2</sub>)

**SPECIAL FIRE-FIGHTING PRECAUTIONS:** Spills produce extremely slippery surfaces.

**PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:** No special protective equipment required

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** No special precautions required.

**ENVIRONMENTAL PRECAUTIONS:** Do not contaminate water.

**METHODS FOR CLEANING UP:** Do not flush with water. Dam up. Soak up with inert absorbent material. If liquid has been spilled in large quantities clean up promptly by scoop or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

## SECTION 7: HANDLING AND STORAGE

**HANDLING:** Avoid contact with skin and eyes. When preparing the working solution ensure there is adequate Ventilation, when using do not smoke.

**STORAGE:** Keep in a dry, cool place (0 - 30°C). When preparing the working solution ensure there is adequate ventilation. Freezing will affect the physical condition and may damage the material.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTIO

**ENGINEERING CONTROLS:** Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

### PERSONAL PROTECTION EQUIPMENT

- **RESPIRATORY PROTECTION:** In case of insufficient ventilation wear suitable respiratory equipment...
- **HAND PROTECTION:** Rubber gloves.
- **EYE PROTECTION:** Safety glasses with side-shields. Do not wear contact lenses.
- **SKIN PROTECTION:** Chemical resistant apron or protective suit if splashing or contact with solution is likely.
- **HYGIENE MEASURES:** Wash hands before breaks and immediately after handling the product. Handle in accordance of good industrial hygiene and safety practice.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**FORM:** Viscous liquid

**COLOR:** milky

**ODOR:** aliphatic

**PH:** 6-8@ 5 g/l for product series. See Technical Bulletin for specific value.

**MELTING POINT (°C):** Not applicable

**FLASH POINT (°C):** Does not flash

**AUTOIGNITION TEMPERATURE (°C): Does not ignite**

**VAPOR PRESSURE (MM Hg): 0.002 @ 20°C**

**APPROX BULK DENSITY: See Technical Bulletin**

**WATER SOLUBILITY: See Technical Bulletin**

**VISCOSITY (MPA S): See Technical Bulletin**

## SECTION 10: STABILITY AND REACTIVITY

**STABILITY: Product is stable, No hazardous polymerization will occur.**

**HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce: carbon oxides (Cox), nitrogen oxides (NOx).**

## SECTION 11: TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

- **ORAL: LD50/oral/rat>5000 mg/kg**
- **DERMAL: The product is not expected to be toxic in contact with the skin.**
- **INHALATIONS: The product is not expected to be toxic by inhalation.**

### IRRITATION

- **SKIN: May cause skin irritation with susceptible persons.**
- **EYES: May cause eye irritation with susceptible persons.**
- **SENSITIZATION: The product is not expected to be sensitizing.**
- **CHRONIC TOXICITY: Prolonged skin contact may defat the skin and produce dermatitis.**

## SECTION 12: ECOLOGICAL INFORMATION

### ECO TOXICITY

The product is rapidly eliminated from the aquatic medium through irreversible adsorption onto the suspended matter and dissolved organics.

- **FISH:** LC50/Danio rerio/96 hr > 100 mg/L (OECD 203) (Based on the toxicity of the components using the Conventional Method)
- **ALGAE:** IC50/Scenedesmus subspicatus /72 hr. > 100 mg/L (OECD 201) (Based on the toxicity of the components using the Conventional Method.)
- **DAPHNIA:** EC50/Daphnia magna/48 hr. > 100 mg/L (OECD 202) (Based on the toxicity of the components using the Conventional Method.)
- **PERSISTENCE/DEGRADABILITY:** Not readily biodegradable

## SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE FROM RESIDUES/UNUSED PRODUCTS:** In accordance with federal, state and local regulations.

**CONTAMINATED PACKAGING:** Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local regulations.

## SECTION 14: TRANSPORT INFORMATION

Not regulated by DOT, IATA, IMDG.

## SECTION 15: REGULATORY INFORMATION

All components of this product are on the TSCA and DSL inventories.

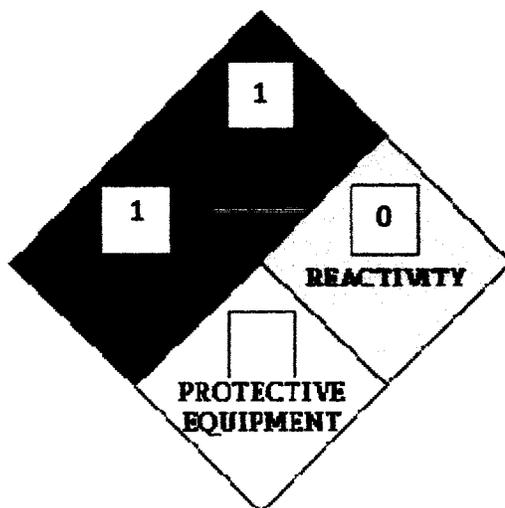
RCRA STATUS: Not a hazardous waste.

HAZARDOUS WASTE NUMBER: Not applicable

REPORTABLE QUANTITY: Not applicable

THRESHOLD PLANNING QUANTITY: Not applicable

CALIFORNIA PROPOSITION 65 INFORMATION: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains a chemical(s) known to the State of California to cause cancer: residual acrylamide.



## SECTION 16: OTHER INFORMATION

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.



# Material Safety Data Sheet

## Product and company identification

**Product name** : TRETOLITE™ DMO7040 DEMULSIFIER  
™ a trademark of Baker Hughes, Inc.

**Supplier** : Baker Petrolite  
A Baker Hughes Company  
12645 W. Airport Blvd.  
Sugar Land, TX 77478  
For Product Information/MSDSs Call: 800-231-3606  
(8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400

**Material Uses** : Special: Demulsifier.

**Code** : DMO7040

**Validation date** : 11/22/2009.

**Print date** : 11/22/2009.

**Version** : 5

**Responsible name** : Global Regulatory Affairs - Telephone 281-276-5400 or 800-231-3606

**In case of emergency** : CHEMTREC: 800-424-9300 (U.S. 24 hour)  
Baker Petrolite: 800-231-3606  
(001)281-276-5400  
CANUTEC: 613-996-6666 (Canada 24 hours)  
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

## 2. Hazards identification

**Physical state** : Liquid.

**Odor** : Aromatic hydrocarbon.

**Color** : Amber.

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency overview** : **WARNING!**  
COMBUSTIBLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER. ASPIRATION HAZARD.

At elevated temperatures, vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Static discharges can cause ignition or explosion when container is not bonded. Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Vapors can travel to a source of ignition and flashback. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

**Routes of entry** : Dermal contact. Eye contact. Inhalation.

**Potential acute health effects**

**Inhalation** : Can cause central nervous system (CNS) depression. Irritating to respiratory system.

**Ingestion** : Can cause central nervous system (CNS) depression. Aspiration hazard if swallowed. Can enter lungs and cause damage.

**Skin** : Harmful in contact with skin. Moderately irritating to the skin.

## 2. Hazards identification

**Eyes** : Irritating to eyes.

### Potential chronic health effects

**Chronic effects** : Contains material that may cause target organ damage, based on animal data. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Carcinogenicity** : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

**Target organs** : Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

### Over-exposure signs/symptoms

**Inhalation** : respiratory tract irritation, nausea or vomiting, coughing, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness

**Ingestion** : nausea or vomiting

**Skin** : irritation, redness, dryness, cracking

**Eyes** : pain or irritation, watering, redness

**Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

## 3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Light aromatic naphtha	64742-95-6	10 - 30
1,2,4-Trimethylbenzene	95-63-6	10 - 30
Heavy aromatic naphtha	64742-94-5	5 - 10
,3,5-Trimethylbenzene	108-67-8	5 - 10
Xylene	1330-20-7	1 - 5
1,2,3-Trimethylbenzene	526-73-8	1 - 5
Naphthalene	91-20-3	0.1 - 1
Ethylbenzene	100-41-4	0.1 - 1

## 4. First aid measures

**Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

**Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

**Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear suitable protective clothing and gloves. Remove contaminated clothing and shoes.

### Additional information

product is ingested and vomiting occurs naturally, have person lean forward to reduce the risk of aspiration into the lungs.

## **5. Fire-fighting measures**

**Flammability of the product** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

### **Extinguishing media**

- Suitable** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : carbon dioxide, carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## **6. Accidental release measures**

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### **Methods for cleaning up**

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.

## **7. Handling and storage**

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

**7. Handling and storage**

**Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

**8. Exposure controls/personal protection**

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredients:	List name	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	Notations
1,2,4-Trimethylbenzene	US ACGIH	25	123	-	-	-	-	-	-	-	
	OSHA PEL 1989	25	125	-	-	-	-	-	-	-	
1,3,5-Trimethylbenzene	US ACGIH	25	123	-	-	-	-	-	-	-	
	OSHA PEL 1989	25	125	-	-	-	-	-	-	-	
1,2,3-Trimethylbenzene	US ACGIH	25	123	-	-	-	-	-	-	-	
	OSHA PEL 1989	25	125	-	-	-	-	-	-	-	
Xylene	US ACGIH	100	434	-	150	651	-	-	-	-	
	OSHA PEL	100	435	-	-	-	-	-	-	-	
	OSHA PEL 1989	100	435	-	150	655	-	-	-	-	
Naphthalene	US ACGIH	10	52	-	15	79	-	-	-	-	
	OSHA PEL	10	50	-	-	-	-	-	-	-	
	OSHA PEL 1989	10	50	-	15	75	-	-	-	-	
Ethylbenzene	US ACGIH	100	-	-	125	-	-	-	-	-	
	OSHA PEL	100	435	-	-	-	-	-	-	-	
	OSHA PEL 1989	100	435	-	125	545	-	-	-	-	

**Consult local authorities for acceptable exposure limits.**

**Only components of this product with established exposure limits appear in the box above.**

**OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.**

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Take off contaminated clothing and wash before re-use.

**Personal protection**

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant gloves: Nitrile or Neoprene gloves. 4H gloves.
- Eyes** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.
- Skin** : Wear long sleeves and other protective clothing to prevent repeated or prolonged skin contact.

## 9. Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: 45°C (113°F) [PMCC]
Auto-ignition temperature	: Not available.
Flammable limits	: Not available.
Color	: Amber.
Odor	: Aromatic hydrocarbon.
pH	: 5 to 6
	: in IPA/water
Boiling/condensation point	: Not available.
Initial Boiling Point	: Not available.
Melting/freezing point	: Not available.
Relative density	: 0.93 (15.6°C)
Density	: 7.75 (lbs/gal)
Vapor density	: >1 [Air = 1]
Odor threshold	: Not available.
Evaporation rate	: Not available.
VOC	: Not available.
Viscosity	: Not available.
Solubility (Water)	: Dispersible
Vapor pressure	: Not available.
Pour Point	: Not available.
Partition coefficient (LogKow)	: Not available.

## 10. Stability and Reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas. Avoid exposure - obtain special instructions before use. Do not swallow.
Materials to avoid	: Reactive or incompatible with the following materials: oxidizing materials and acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions of reactivity	: Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

## 11. Toxicological information

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Light aromatic naphtha	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Oral	Rat	2900 mg/kg	-
1,2,4-Trimethylbenzene	LD50 Oral	Rat	5 gm/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours
	Vapor			
Heavy aromatic naphtha	LD50 Dermal	Rabbit	>2 mL/kg	-
	LD50 Oral	Rat	3200 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation	Rat	>11.4 mg/L	6 hours

**11 . Toxicological information**

	Vapor				
	LC50 Inhalation	Rat	>590 mg/m3	4 hours	
	Vapor				
1,3,5-Trimethylbenzene	LD50 Oral	Rat	5000 mg/kg	-	
	LC50 Inhalation	Rat	24000 mg/m3	4 hours	
	Vapor				
Xylene	LD50 Dermal	Rabbit	>1700 mg/kg	-	
	LD50 Oral	Rat	4300 mg/kg	-	
	LD50 Oral	Male rat	3523 mg/kg	-	
	LC50 Inhalation	Rat	5000 ppm	4 hours	
	Gas.				
Naphthalene	LD50 Dermal	Rabbit	>20 gm/kg	-	
	LD50 Dermal	Rat	>2500 mg/kg	-	
	LD50 Oral	Rat	490 mg/kg	-	
Ethylbenzene	LD50 Dermal	Rabbit	15400 mg/kg	-	
	LD50 Dermal	Rabbit	>5000 mg/kg	-	
	LD50 Dermal	Rabbit	17800 uL/kg	-	
	LD50 Oral	Rat	3500 mg/kg	-	
	LC50 Inhalation	Rat	55000 mg/m3	2 hours	
	Vapor				

**Carcinogenicity**

**Classification**

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Xylene	A4	3	-	-	-	-
Naphthalene	A4	2B	-	-	Possible	-
Ethylbenzene	A3	2B	-	-	-	-

**Chronic toxicity Remarks**

1) Light aromatic naphtha

Solvent naphtha (petroleum), light aromatic is a component of this product. Solvent naphtha (petroleum), light aromatic may cause damage to the peripheral nerves, resulting in numbness or tingling of the extremities with chronic (long term) exposure to high concentrations. (Micromedex) Rats exposed for 4 months to 1700 ppm of a solvent similar to this product showed evidence of mild damage to the liver, lungs and kidneys. These effects were not seen in rats exposed for one year to 350 ppm of another similar solvent. Rats exposed to vapors of a similar solvent during pregnancy showed embryo/fetotoxicity at concentrations producing maternal toxicity.

In response to a TSCA test rule, several studies of a solvent similar to this product were completed. Mutagenicity studies and a rat inhalation neurotoxicity study were negative. In a mouse developmental effects study, reduced fetal body weight was seen but no teratogenicity. A rat reproductive effects study demonstrated toxicity but little effect on reproductive parameters. (Vendor MSDS)

Ingestion has produced Central Nervous System effects in laboratory animals. (EPA/OTS 87-8214199 and 88-920000348)

2) 1,2,4-Trimethylbenzene

1,2,4-Trimethylbenzene, also known as pseudocumene, is a component of this product. Chronic pseudocumene exposure may provoke bronchospasm with cough and wheezing (Plunkett, 1976; ACGIH, 1991; Battig et al, 1956). Respiratory distress was noted in experimental animals following sub acute inhalation exposure (Gage, 1970). Nervousness and anxiety were noted with chronic occupational exposure (Battig et al, 1956; ACGIH, 1991).

At the time of this review, no studies were found on the potential adverse reproductive effects of pseudocumene in humans, but trimethylbenzenes (including pseudocumene) can cross the placental barrier (Clayton & Clayton, 1994; Doroty et al, 1976). In an experimental animal study, offspring born to pregnant rats exposed to pseudocumene were healthy at birth and grew normally (Cameron et al, 1938).

Blood effects such as anemia and delayed clotting time have been noticed in workers chronically exposed to a solvent containing trimethylbenzene. The blood effects, however, may have been due to a contaminant in the solvent such as benzene (a known blood toxin).

3) Heavy aromatic naphtha

**11 . Toxicological information**

Not available.

**1,3,5-Trimethylbenzene**

1,3,5-Trimethylbenzene (Mesitylene) is a component of this product. Chronic asthmatic-like bronchitis may be a delayed chronic hazard (EPA, 1985; Laham, 1987; HSDB, 1997). Nervousness, tension, and anxiety have been noted in chronically exposed workers with exposure to a mixture of solvents including mesitylene (HSDB, 1997). Elevated alkaline phosphates and SGOT (liver enzymes) levels have been noted in chronic animal inhalation studies (Clayton & Clayton, 1994). These effects have not been reported in exposed humans. (Reprotext)

Thrombocytopenia (a lack of platelets in the blood) with bleeding from the gums and nose and mild anemia may occur with chronic exposure to mesitylene as a component of the commercial solvent mixture, "Fleet-X-DV-99" (Plunkett, 1976; Finkel, 1983; HSDB, 1997). Coagulation (clotting of the blood) times were delayed by about 40% in a group of workers chronically exposed to a mixture of solvents containing about 30% mesitylene (Laham, 1987). These hematological disorders may have been due to a contaminant, such as benzene (Hathaway et al, 1996). Thrombocytosis (an increase of platelets in the blood) and thrombocytopenia have been noted in rabbits (Clayton & Clayton, 1994). (Reprotext)

1,3,5-Trimethylbenzene has been positive in a mutagenicity assay (Lewis, 1992). (Reprotext)

**5) Xylene**

Xylene (mixed isomers) is a component of this product. Effects of chronic exposure to xylene are similar to those of acute exposure, but may be more severe. Chronic inhalation reportedly was associated with headache, tremors, apprehension, memory loss, weakness, dizziness, loss of appetite, nausea, ringing in the ears, irritability, thirst, anemia, mucosal bleeding, enlarged liver, and hyperplasia, but not destruction of the bone marrow (Clayton & Clayton, 1994; ILO, 1983). Some earlier reports of effects of chronic exposure to xylene have been questioned, as exposures were not limited to xylene alone.

Effects on the blood have been reported from chronic exposure to as little as 50 mg/m<sup>3</sup> (Pap & Varga, 1987). Repeated exposure can damage bone marrow, causing low blood cell count and can damage the liver and kidneys (NJ Department of Health, Hazardous Substance Fact Sheet). Chronic xylene exposure (usually mixed with other solvents) has produced reversible damage to the CNS (ILO, 1983). CNS effects may be exacerbated by ethanol abuse (Savolainen, 1980). Xylene may damage hearing or enhance sensitivity to noise in chronic occupational exposures (Morata et al, 1994), probably from neurotoxic mechanism. Tolerance to xylene can occur over the work week and disappear over the weekend. (ACGIH, 1992).

Inhalation exposure has produced fetotoxicity and postnatal developmental toxicity in laboratory animals. (API, 1978, Kensington, MD, EPA/OTS Document No. 878210350 and Hass, U., et al, 1995, Neurotoxicology and Teratology 17: 341-349 and 1997, Neurotoxicology 18: 547-552)

Inhalation of hexane has synergistically enhanced the hearing loss caused by inhalation exposure to xylene in laboratory animals. (Nylén, P., 1996, Food and Chemical Toxicology, 34: 1121-1123 and Nylén, P. and Hagman, M., 1994, Pharmacology & Toxicology, 74: 124-129)

Xylene has tested positive as a dermal sensitizer. [Altman, A.T. (1977) Archives of Dermatology 113: 1460 and Palmer, K.T. and Rycroft, R.J. F. (1993) Contact Dermatitis 28: 44]

**6) 1,2,3-Trimethylbenzene**

Not available.

**7) Naphthalene**

This product contains naphthalene. A National Toxicology Program (NTP) report concluded there is clear evidence to support carcinogenicity of naphthalene in male and female rats. These observations were based on 2-year inhalation studies in which the test animals were exposed to 10, 30, and 60 ppm naphthalene. In male and female rats, exposure to naphthalene caused significant increases in the incidence of nonneoplastic lesions of the nose (NTP TR-500). The relevance of the rodent findings to humans is questionable.

Naphthalene has caused hemolytic anemia, jaundice, cataracts (Shopp et al, 1984), allergic reactions (Tsyrukunov & Skovleva, 1985), possible neurotoxicity (Riala et al, 1984), and aplastic anemia (Harden & Baetjer, 1978) in humans. Increased lung alveolar adenomas were seen in mice exposed to 30 ppm naphthalene for 6hrs/day for 6 months (ACGIH, 1992).

## 11 . Toxicological information

Naphthalene crosses the placenta leading to methemoglobinemia (decreased ability for the blood to carry oxygen), and/or hemolytic anemia, conditions considered especially dangerous to the unborn (Reprotext). Liver and kidney damage has also been seen with exposure to naphthalene (Reprotext).

Peripheral lens opacities occurred in 8 of 21 workers exposed to high levels of naphthalene fumes or vapors for 5 years, but cataracts have not been reported in other occupational studies. (Hathaway et al, 1991).

The International Agency for Research on Cancer (IARC) evaluated naphthalene and concluded that there was sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence that it causes cancer in exposed humans. Accordingly, IARC classified naphthalene as a possible human carcinogen (Group 2B).

### 8) Ethylbenzene

Ethylbenzene is a component of this product. Prolonged exposure may result in CNS, upper respiratory tract, blood, and liver disorders (ILO, 1983). Chronic exposures higher than 100 ppm produced fatigue, headache, drowsiness, and mild eye and respiratory irritation (Hathaway et al, 1991). Benzene and some alkylbenzene compounds can suppress the bone marrow, but no original studies were found showing this effect with ethylbenzene (Reprotext).

Slight liver and kidney changes occurred in rats exposed to 600 ppm for up to 16 weeks (Elovaara et al, 1985; Heinonen et al, 1983). The level of exposure, not the duration, affected the metabolism of ethylbenzene in rats (Engstrom et al, 1985). (Reprotext)

Ethylbenzene was weakly positive for inducing sister chromatid exchanges in human white blood cells in culture (Norppa & Vainio, 1983) and produced mutations in mouse lymphocytes. (RTECS)

Ethylbenzene caused retarded skeletal development, extra ribs, tail misplacement, and decreased weight gain in fetal rats exposed to a high dose of 2,400 mg/m<sup>3</sup> which was also toxic to the mothers (Tatrai et al, 1982). However, much lower doses of less than 100 ppm produced skeletal abnormalities, affected female fertility, were fetotoxic, and caused smaller litter sizes in rats. (RTECS) It has been detected in human umbilical cord (fetal) blood (Clayton & Clayton, 1982), and would thus be available to the fetus. (Reprotext)

Ethylbenzene is classified by the International Agency for Research (IARC) as a Group 2B carcinogen (possibly carcinogenic to humans). This classification was based on sufficient evidence in animals, but inadequate evidence for cancer in exposed humans.

The National Toxicology Program (NTP) concluded there is clear evidence to support the carcinogenicity of ethylbenzene in male rats and some evidence in female rats and male and female mice. These observations were based on 2 year inhalation studies in which the test animals were exposed to 0-750 ppm ethylbenzene. The carcinogenic activity was observed primarily in the groups exposed to 250 and 750 ppm. The OSHA and ACGIH 8 hour TWA exposure for ethylbenzene is 100 ppm (NTP TR-466).

In two studies of workers potentially exposed to ethylbenzene, no cancer incidence or mortality was observed (IARC Monograph 77).

## 12 . Ecological information

### Aquatic ecotoxicity

**Conclusion/Summary** : Not available.

### Biodegradability

**Conclusion/Summary** : Not available.

## 13 . Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1993	FLAMMABLE LIQUID, N.O.S. (Contains: Light aromatic naphtha, Xylene)	3	III		-
TDG Classification	UN1993	FLAMMABLE LIQUID, N.O.S. (Contains: Light aromatic naphtha, Xylene)	3	III		-
IMDG Class	UN1993	FLAMMABLE LIQUID, N.O.S. (Contains: Light aromatic naphtha, Xylene)	3	III		<b>Emergency schedules (EmS)</b> F-E S-E

PG\* : Packing group

**DOT Reportable Quantity** Xylene, 391 gal of this product.  
Naphthalene, 1333 gal of this product.

**Marine pollutant** Not applicable.

**North-America NAERG** : 128

## 15 . Regulatory information

**HCS Classification** : Combustible liquid  
Irritating material  
Carcinogen  
Target organ effects

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.  
**TSCA 12(b) one-time export**: xylene; naphthalene  
**SARA 302/304/311/312 extremely hazardous substances**: No products were found.  
**SARA 302/304 emergency planning and notification**: No products were found.  
**SARA 302/304/311/312 hazardous chemicals**: 1,2,4-trimethylbenzene; 1,2,3-trimethylbenzene; mesitylene; xylene  
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**:  
TRETOLITE™ DMO7040 DEMULSIFIER: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard  
  
CERCLA: Hazardous substances.: xylene: 100 lbs. (45.4 kg); cumene: 5000 lbs. (2270 kg); naphthalene: 100 lbs. (45.4 kg); potassium hydroxide: 1000 lbs. (454 kg); ethylbenzene: 1000 lbs. (454 kg);  
**Clean Water Act (CWA) 307**: naphthalene; ethylbenzene

**15 . Regulatory information**

**Clean Water Act (CWA) 311:** xylene; naphthalene; potassium hydroxide; ethylbenzene

**Clean Air Act (CAA) 112 accidental release prevention:** No products were found.

**Clean Air Act (CAA) 112 regulated flammable substances:** No products were found.

**Clean Air Act (CAA) 112 regulated toxic substances:** No products were found.

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed

**SARA 313**

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
<b>Supplier notification</b>	1,2,4-Trimethylbenzene	95-63-6	10 - 30
	Xylene	1330-20-7	1 - 5
	Naphthalene	91-20-3	0.1 - 1
	Ethylbenzene	100-41-4	0.1 - 1

**United States inventory (TSCA 8b)** : All components are listed or exempted.

**Canada**

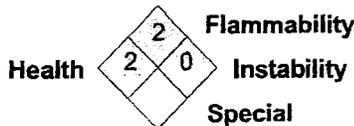
**WHMIS (Canada)** : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).  
 Class D-2A: Material causing other toxic effects (Very toxic).  
 Class D-2B: Material causing other toxic effects (Toxic).

**Canada (CEPA DSL):** : All components are listed or exempted.

**16 . Other information**

**Label requirements** : COMBUSTIBLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER. ASPIRATION HAZARD.

**National Fire Protection Association (U.S.A.)** :



**Date of printing** : 11/22/2009.

Indicates information that has changed from previously issued version.

**Notice to reader**

**NOTE:** The information on this MSDS is based on data which is considered to be accurate. Baker Hughes, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.



# Material Safety Data Sheet

## 1. Product and company identification

**Product name** : TRETOLITE™ RBW301X WATER CLARIFIER  
™ a trademark of Baker Hughes, Inc.

**Supplier** : Baker Petrolite  
A Baker Hughes Company  
12645 W. Airport Blvd.  
Sugar Land, TX 77478  
For Product Information/MSDSs Call: 800-231-3606  
(8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400

**Material Uses** : Special: Water clarifier.

**Code** : RBW301X

**Validation date** : 12/27/2012.

**Print date** : 12/27/2012.

**Version** : 4

**Responsible name** : Global Regulatory Affairs - Telephone 281-276-5400 or 800-231-3606

**In case of emergency** : CHEMTREC: 800-424-9300 (U.S. 24 hour)  
Baker Petrolite: 800-231-3606  
(001)281-276-5400  
CANUTEC: 613-996-6666 (Canada 24 hours)  
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

## 2. Hazards identification

**Physical state** : Liquid. [Clear to hazy.]  
**or** : Sweet. [Slight]

**Color** : Amber to dark brown.

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency overview** : CAUTION!  
MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.  
Do not ingest. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

**Routes of entry** : Dermal contact. Eye contact. Inhalation.

**Potential acute health effects**

**Inhalation** : Moderately irritating to the respiratory system.

**Ingestion** : Harmful if swallowed.

**Skin** : Moderately irritating to the skin.

**Eyes** : Moderately irritating to eyes.

**Potential chronic health effects**

**Chronic effects** : Contains material that may cause target organ damage, based on animal data.

**Target organs** : Contains material which may cause damage to the following organs: kidneys, the nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

**Over-exposure signs/symptoms**

**Inhalation** : respiratory tract irritation, coughing

**Ingestion** : None known.

## 2. Hazards identification

- Skin** : irritation, redness
  - Eyes** : irritation, watering, redness
  - Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
- See toxicological information (Section 11)

## 3. Composition/information on ingredients

<b>Name</b>	<b>CAS number</b>	<b>%</b>
Ethylene glycol	107-21-1	10 - 30
Amine salt	Trade secret.	5 - 10

## 4. First aid measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

## 5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
  - Suitable** : Use an extinguishing agent suitable for the surrounding fire.
  - Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : carbon dioxide, carbon monoxide, nitrogen oxides, halogenated compounds
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up**

## 6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.

## 7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredients:	List name	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	Notations
Ethylene glycol	US ACGIH OSHA PEL 1989	-	-	-	-	-	-	-	100	-	[a]
		-	-	-	-	-	-	50	125	-	

Form: [a]Aerosol

Consult local authorities for acceptable exposure limits.

Only components of this product with established exposure limits appear in the box above.

If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Take off contaminated clothing and wash before reuse.

### Personal protection

## 8 . Exposure controls/personal protection

- Respiratory** : If a risk assessment indicates it is necessary, use a properly fitted, air purifying or supplied air respirator complying with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant gloves: Neoprene gloves.
- Eyes** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.
- Skin** : Wear long sleeves and other protective clothing to prevent repeated or prolonged skin contact.

## 9 . Physical and chemical properties

- Physical state** : Liquid. [Clear to hazy.]
- Flash point** : Closed cup: >93.4°C (>200.1°F) [SFCC]
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Color** : Amber to dark brown.
- Odor** : Sweet. [Slight]
- pH** : 3.6
- Boiling/condensation point** : Neat - without dilution.
- Boiling/condensation point** : Not available.
- Initial Boiling Point** : Not available.
- Melting/freezing point** : Not available.
- Relative density** : 1.11 (15.6°C)
- Density** : 9.25 (lbs/gal)
- Vapor density** : >1 [Air = 1]
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- VOC** : 140 g/l
- Viscosity** : Not available.
- Solubility (Water)** : Soluble
- Vapor pressure** : Not available.
- Pour Point** : Not available.
- Partition coefficient (LogKow)** : Not available.

## 10 . Stability and Reactivity

- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Conditions to avoid** : No specific data.
- Materials to avoid** : Reactive or incompatible with the following materials: oxidizing materials.  
Slightly reactive or incompatible with the following materials: acids.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Conditions of reactivity** : Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

**11 . Toxicological information**

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Ethylene glycol	LD50 Dermal	Rabbit	9530 uL/kg	-
	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Oral	Female rat	4000 mg/kg	-

**Carcinogenicity**

**Classification**

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Ethylene glycol	A4	-	-	-	-	-

**Chronic toxicity Remarks**

1) Ethylene glycol

Ethylene glycol (EG) is a component of this product. Chronic ingestion has shown to cause adverse kidney, liver, bladder, and blood effects in laboratory animals (NTP Technical Report, 1993; Fund. Appl. Toxicol. 7:547-65; FD Cosmet Toxicol. Vol. 3:229-34; Drug and Chem Toxicol 13(1):43-70). Also, chronic ingestion has caused adverse effect on the sperm (decreased motility and increased percentage of abnormal sperm) in laboratory animals. [Morrissey, R.E. et al, 1988, Fund Appl Toxicol, 11(2), pp 359-71]

Ingestion of ethylene glycol has produced Central Nervous System depression, effects on the cardiopulmonary system, and neurological impairment. [Gosselin, R.E., Smith, R.P., and Hodge, H.C., 1984, Clinical Toxicology of Commercial Products; NTP Technical Report 413, 1993; CCOHS CHEMINFO, 2003, Record No. 41 for ethylene glycol; Mallya, K.B. et al, 1986, J Neurol Sce, 13(4) pp 340-41; Anderson, B. , 1990, Am J. Med, 88, pp 87-88]

EG is an animal teratogen at doses which produced mild toxicity to the mother. EG given at doses up to 5,000 mg/kg/day to pregnant rats or up to 3,000 mg/kg/day to mice induced a wide variety of fetal malformations, including those of the musculoskeletal, bone marrow, and spleen (RTECS, 1996). It was also a teratogen and an embryotoxin at doses producing no toxicity to the mother in laboratory animals. (Lamb, J.C. et al, 1985, Toxicol Appl Pharmacol, 81, p 100 and Price, C.J. et 985, Appl Pharmacol, 81, pp113-27)

Ethylene glycol is used to cryopreserve embryos of many mammalian species, including pigs, goats, cows and horses (Otoi et al, 1995; Fieni et al, 1995; Hochi et al, 1994). This makes it unlikely that ethylene glycol itself is the active teratogen in whole animal studies. The EG metabolite, glycolic acid, was active in contrast to EG itself for inducing developmental defects in whole rat embryos in culture (Carney et al, 1996). EG inhibited metabolic cooperation of Chinese hamster cells in vitro, a finding which may have implications for its mechanism of teratogenicity (Loch-Carusio et al, 1984).

2) Amine salt

Not available.

**12 . Ecological information**

**Aquatic ecotoxicity**

Product/ingredient name	Result	Species	Exposure
Ethylene glycol	Acute LC50 >100000 ug/L	Marine Crustaceans - Common shrimp, sand shrimp - Crangon crangon - Adult	48 hours
	Acute LC50 6900000 to 8800000 ug/L	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 8050000 ug/L	Fresh water Fish - Fathead minnow - Pimephales promelas - <=7 days	96 hours
	Chronic NOEC 11610000 ug/L	Fresh water Daphnia - Water flea - Ceriodaphnia dubia - <=24 hours	48 hours
	Chronic NOEC 6090000 ug/L	Fresh water Fish - Fathead minnow - Pimephales promelas - <=7 days	96 hours

**Conclusion/Summary** : Not available.

**Biodegradability**

**12 . Ecological information**

Conclusion/Summary : Not available.

**13. Disposal considerations**

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

**14 . Transport information**

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Contains: Ethylene glycol)	9	III		This material is Not Regulated if transported in a package that does not meet or exceed the Reportable Quantity (RQ).
3 Classification	Not regulated.	-	-	-	-	-
IMDG Class	Not regulated.	-	-	-	-	-
IATA-DGR Class	Not regulated.	-	-	-	-	-

PG\* : Packing group

DOT Reportable Quantity Ethylene glycol, 5379 gal of this product.

Marine pollutant Not applicable.

North-America NAERG : 171

**15 . Regulatory information**

HCS Classification : Irritating material  
Target organ effects

U.S. Federal regulations : United States Inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Ethylene glycol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

TRETOLITE™ RBW301X WATER CLARIFIER: Immediate (acute) health hazard, Delayed (chronic) health hazard

CERCLA: Hazardous substances.: zinc chloride: 1000 lbs. (454 kg); Ethylene glycol: 5000 lbs. (2270 kg);

**15 . Regulatory information**

Clean Water Act (CWA) 307: zinc chloride  
 Clean Water Act (CWA) 311: zinc chloride  
 Clean Air Act (CAA) 112 regulated flammable substances: No products were found.  
 Clean Air Act (CAA) 112 regulated toxic substances: No products were found.  
 Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :  
 Listed

**SARA 313**

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Supplier notification	: Ethylene glycol	107-21-1	10 - 30
United States inventory (TSCA 8b)	: All components are listed or exempted.		

**Canada**

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).  
 Class D-2B: Material causing other toxic effects (Toxic).  
 Canada (CEPA DSL): : All components are listed or exempted.

**16 . Other information**

Label requirements : MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

National Fire Protection Association (U.S.A.) :



Date of printing : 12/27/2012.

▣ Indicates information that has changed from previously issued version.

**Notice to reader**

NOTE: The information on this MSDS is based on data which is considered to be accurate. Baker Hughes, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.



# Material Safety Data Sheet

## 1. Product and company identification

Product name : BPW 76450 ORGANIC COAGULANT  
Supplier : Baker Petrolite  
A Baker Hughes Company  
12645 W. Airport Blvd.  
Sugar Land, TX 77478  
For Product Information/MSDSs Call: 800-231-3606  
(8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400

Material Uses : Special: Water clarifier.  
Code : BPW76450  
Validation date : 2/26/2013.  
Print date : 2/26/2013.  
Version : 4  
Responsible name : Global Regulatory Affairs - Telephone 281-276-5400 or 800-231-3606  
In case of emergency : CHEMTREC: 800-424-9300 (U.S. 24 hour)  
Baker Petrolite: 800-231-3606  
(001)281-276-5400  
CANUTEC: 613-996-6666 (Canada 24 hours)  
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

## 2. Hazards identification

Physical state : Liquid.  
Odor : None.  
Color : Yellow. [Light]  
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
Emergency overview : CAUTION!  
MAY CAUSE EYE AND SKIN IRRITATION.  
Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.  
Routes of entry : Dermal contact. Eye contact. Inhalation.  
Potential acute health effects  
Inhalation : No known significant effects or critical hazards.  
Ingestion : No known significant effects or critical hazards.  
Skin : Moderately irritating to the skin.  
Eyes : Moderately irritating to eyes.  
Potential chronic health effects  
Over-exposure signs/symptoms  
Inhalation : None known.  
Ingestion : None known.  
Skin : irritation, redness  
Eyes : irritation, watering, redness

See toxicological information (Section 11)

**3 . Composition/information on ingredients**

<b>Name</b>	<b>CAS number</b>	<b>%</b>
Polyalkylammonium chloride	Trade secret.	10 - 30
Sodium chloride	7647-14-5	0.1 - 1

**4 . First aid measures**

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**5 . Fire-fighting measures**

**Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Extinguishing media**

**Suitable** : Use an extinguishing agent suitable for the surrounding fire.

**Not suitable** : None known.

**Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Hazardous thermal decomposition products** : carbon dioxide, carbon monoxide, nitrogen oxides, halogenated compounds, metal oxide/oxides

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**6 . Accidental release measures**

**Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Methods for cleaning up**

**Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact

**6 . Accidental release measures**

information and section 13 for waste disposal.

**7 . Handling and storage**

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

**8 . Exposure controls/personal protection**

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredients:	List name	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	Notations
No exposure limit value known.											

**If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.**

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Take off contaminated clothing and wash before reuse.

**Personal protection**

- Respiratory** : If a risk assessment indicates it is necessary, use a properly fitted, air purifying or supplied air respirator complying with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant gloves: Nitrile or Neoprene gloves.
- Eyes** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.
- Skin** : Wear long sleeves and other protective clothing to prevent repeated or prolonged skin contact.

## 9 . Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: >93.4°C (>200.1°F) [TCC]
Auto-ignition temperature	: Not available.
Flammable limits	: Not available.
Color	: Yellow. [Light]
Odor	: None.
pH	: 6.5
	: 5% of product
Boiling/condensation point	: >100°C (>212°F)
Initial Boiling Point	: Not available.
Melting/freezing point	: Not available.
Relative density	: 1.03 (15.6°C)
Density	: 8.6 (lbs/gal)
Vapor density	: >1 [Air = 1]
Odor threshold	: Not available.
Evaporation rate	: Not available.
VOC	: Not available.
Viscosity	: Not available.
Solubility (Water)	: Soluble
Vapor pressure	: Not available.
Pour Point	: Not available.
Partition coefficient (LogKow)	: Not available.

## 10 . Stability and Reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: No specific data.
Materials to avoid	: Reactive or incompatible with the following materials: oxidizing materials and metals.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions of reactivity	: Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

## 11 . Toxicological information

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Polyalkylammonium chloride	LD50 Oral	Rat	3 g/kg	-
Sodium chloride	LD50 Dermal	Rabbit	>10000 mg/kg	-
	LD50 Oral	Rat	3000 mg/kg	-
	LC50 Inhalation	Rat	42000 mg/m <sup>3</sup>	1 hours
	Dusts and mists			

### Chronic toxicity Remarks

## 11 . Toxicological information

### 1) Polyalkylammonium chloride

Blood and liver changes were observed in rats given 18300 mg/kg/9W of diallyl dimethyl ammonium chloride polymers orally.

### 2) Sodium chloride

Sodium chloride is a component of this product. Intake of 12.4 g/kg of sodium chloride over a period of 23 days resulted in elevation of blood pressure in humans (RTECS, 1997). Sodium chloride caused a variety of genetic effects in *E. coli* bacteria, rats, and human, hamster, and mouse cells in vitro (RTECS, 1997). When injected in mice at high doses (1900 to 2500 mg), it was embryotoxic and teratogenic in a study designed to pursue a laboratory animal teratogenicity study to its limits (Nishimura & Miyamoto, 1969). In other studies, it was not teratogenic in rats (Grollman & Grollman, 1962); (Minor & Becker 1971; Singh et al, 1973), hamsters (Ferm, 1965) or pigs (Rosendrants et al, 1970). It was nontoxic when injected into chick embryos (McLaughlin et al, 1963).

## 12 . Ecological information

### Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Polyalkylammonium chloride	Acute LC50 0.32 mg/L Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
Sodium chloride	Acute EC50 2430000 ug/L Fresh water	Algae - Diatom - Navicula seminulum	96 hours
	Acute EC50 402.6 mg/L	Daphnia	48 hours
	Acute LC50 1042 mg/L Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - <24 hours	48 hours
	Acute LC50 1000000 ug/L Fresh water	Fish - Striped bass - Morone saxatilis - Larvae	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Water flea - Daphnia pulex	21 days
	Chronic NOEC 100 mg/L Fresh water	Fish - Eastern mosquitofish - Gambusia holbrooki - Adult	8 weeks

Conclusion/Summary : Not available.

### Biodegradability

Conclusion/Summary : Not available.

## 13. Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG\* : Packing group

DOT Reportable Quantity : Not applicable.

Marine pollutant : Not applicable.

North-America NAERG : Not available.

## 15. Regulatory information

HCS Classification : Irritating material

U.S. Federal regulations : **United States Inventory (TSCA 8b):** All components are listed or exempted.

**SARA 302/304/311/312 extremely hazardous substances:** No products were found.

**SARA 302/304 emergency planning and notification:** No products were found.

**SARA 302/304/311/312 hazardous chemicals:** sodium chloride

**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:** BPW 76450 ORGANIC COAGULANT: Immediate (acute) health hazard

**CERCLA: Hazardous substances.:** No products were found.

**Clean Water Act (CWA) 307:** No products were found.

**Clean Water Act (CWA) 311:** No products were found.

**Clean Air Act (CAA) 112 regulated flammable substances:** No products were found.

**Clean Air Act (CAA) 112 regulated toxic substances:** No products were found.

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :**  
Not listed

**United States inventory (TSCA 8b) :** All components are listed or exempted.

### Canada

**WHMIS (Canada) :** Class D-2B: Material causing other toxic effects (Toxic).

**Canada (CEPA DSL):** All components are listed or exempted.

## 16. Other information

Label requirements : MAY CAUSE EYE AND SKIN IRRITATION.

National Fire Protection Association (U.S.A.) :



## 16 . Other information

Date of printing : 2/26/2013.

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

# MATERIAL SAFETY DATA SHEET

## Section 1. PRODUCT IDENTIFICATION

**Product Name:** ATMP Scale Inhibitor  
**Description:** Phosphonate scale inhibitor

**Date:** March 4, 2000

## Section 2. HAZARDOUS INGREDIENTS

(Neutralized components are non-hazardous.)

<u>Ingredient</u>	<u>CAS #</u>	<u>TLV</u>
Aminotri(methylenephosphonic acid)	6419-19-8	Not Established
Caustic soda for neutralization		

## Section 3. PHYSICAL AND CHEMICAL PROPERTIES

**Specific gravity:** 1.07                      **Appearance:** Pale, nearly clear liquid  
**Density:** 8.9 lbs./gallon              **pH:** 8-9              **Odor:** Slightly acrid odor

## Section 4. FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** Not tested, water based material.    **Flammable Limits in Air:** Not tested.  
**Extinguishing Media:** Use extinguishing media appropriate for surrounding materials.  
**Special fire Fighting Procedures:** Fire-fighters should wear self-contained breathing apparatus and full protective clothing.  
**Unusual fire and Explosion Hazards:** None known.

## Section 5. REACTIVITY HAZARD DATA

**Stability:** Stable under normal use and conditions.  
**Incompatibility:** Avoid contact with strong oxidizing agents, alkalis.  
**Conditions to Avoid:** Heating undiluted chemical over 212 F and breathing fumes from heated solution.  
**Hazardous Decomposition Products:** CO, CO<sub>2</sub>, PO<sub>x</sub>.  
**Hazardous Polymerization:** Will not occur.

## Section 6. HEALTH HAZARD DATA

**Primary Route of Entry:** Skin contact, eye contact, and inhalation.  
**Effects of Overexposure:** Corrosive to eyes and irritating or corrosive to skin. May cause irritation or corrosion to mucous membranes and the lungs.  
**Carcinogenic Data:** Not listed on any OSHA Standard.  
**Toxicity:** No data on human toxicity.

## EMERGENCY FIRST AID PROCEDURES

**Eye Contact:** Flush with flowing water or saline solution for **30** minutes. Get immediate medical attention.  
**Skin Contact:** Wash exposed areas with plenty of soap and water. Repeat washing. Remove contaminated clothing and wash before reuse. Consult a physician if irritation persists.  
**Inhalation:** Move person to fresh air. Give artificial respiration if breathing has stopped.  
**Ingestion:** If person is conscious, administer one or two glasses of water or milk. Avoid giving alcohol or alcohol related products. Do not induce vomiting. Seek medical assistance immediately.

## **Section 7. CONTROL AND PROTECTIVE MEASURES**

**Eye Protection:** Splash proof chemical goggles or face shield must be worn.

**Skin Protection:** Wear rubber gloves. Long sleeves and rubber apron are recommended.

**Respiratory Protection:** NIOSH/OSHA approved respirator recommended.

**Ventilation:** General ventilation is sufficient when used normally. Use local exhaust when material is heated or mists/vapors occur.

**Other Protection Clothing/Equipment:** Emergency eye wash station and safety shower in the work area are strongly recommended.

## **Section 8. SAFE HANDLING AND SPILL/LEAK PROCEDURES**

**Handling and Storage:** Keep containers closed when not in use. Avoid splashing on skin, eyes, or mouth. Wash hands after handling. Avoid breathing fumes, especially in closed, heated areas. Wear all recommended personal protective equipment. Store at room temperature.

**Spills/Disposal:** Collect spills with absorbent material and place in lidded container. Wear self-contained breathing apparatus if extreme heat is encountered. Dispose of material in accordance with local, state and federal regulations.

## **Section 9. REGULATORY DATA**

**DOT Description:** Not Restricted Liquid

**TSCA (Toxic Substances Control Act):** All components listed on TSCA Inventory.

**SARA Title III (Superfund Amendments and Reauthorization Act)**

**Section 302. Extremely Hazardous Substances List:** No listed components.

**Section 312. Hazard Category:** Immediate/Acute Health Hazard.

**Section: 313. Toxic Chemicals List:** No listed components above *de minimus* levels.

## **Section 10. SUPPLIER DATA**

TRI Chemicals  
P.O. Box 305  
Keene, CA 93531

(661) 972-0496 Office

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The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, TRI Chemicals makes no warranty, either expressed or implied, with respect to the completeness of continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.

# MATERIAL SAFETY DATA SHEET

## Section 1. PRODUCT IDENTIFICATION

**Product Name:** Clay Stabilizer

**Date:** May 3, 2000

**Description:** Saturated potassium salts solution

## Section 2. HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>CAS #</u>	<u>TLV</u>
None		

## Section 3. PHYSICAL AND CHEMICAL PROPERTIES

**Specific gravity:** 1.30 @ 77F      **pH:** 6-7      **Appearance:** clear, viscous liquid

**Percent Solids:** ~34%      **Solubility in Water:** complete      **Odor:** no characteristic odor

## Section 4. FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** None      **Flammable Limits in Air:** Not Applicable

**Extinguishing Media:** Not Applicable, will not burn unless all the water is lost through evaporation.

**Special fire Fighting Procedures:** Not Applicable

**Unusual fire and Explosion Hazards:** Not Applicable

**NFPA Codes:** Health -0, Flammability -0, Reactivity -0

## Section 5. REACTIVITY HAZARD DATA

**Stability:** Product is stable

**Incompatibility:** Keep away from strong oxidizing and reducing agents.

**Hazardous Decomposition Products:** None.

**Hazardous Polymerization:** Product will not undergo hazardous polymerization.

## Section 6. HEALTH HAZARD DATA

**Primary Route of Entry:** Eyes, a slight irritation is expected.

**Effects of Overexposure:** Tearing, redness is expected.

**Symptoms of Overexposure:** None known.

**Carcinogenic Data:** Product does not contain carcinogens subject to the reporting requirements of SARA Title III.

**Toxicity:**

Ingested: Rat, oral LD50, >50 g/Kg

Eye: Rabbit, -slight

Skin: Rabbit, -none

**HMIS Rating:** Health -0, Flammability -0, Reactivity -0

## EMERGENCY FIRST AID PROCEDURES

**Eye Contact:** Flush with running water for 15 minutes. If irritation persists, get medical attention.

**Skin Contact:** Wash affected areas with soap and water.

**Inhalation:** If breathing is labored, give oxygen. If breathing has stopped, give artificial respiration.

**Ingestion:** If conscious, give two glasses of water to drink and consult a physician.

## **Section 7. CONTROL AND PROTECTIVE MEASURES**

**Eye Protection:** Chemical splash goggles are strongly recommended as minimal protection.

**Skin Protection:** Impervious gloves and a chemical splash apron are recommended.

**Respiratory Protection:** Not needed under normal use conditions.

**Ventilation:** Use mechanical ventilation if product is heated to boiling point.

**Other Protection Clothing/Equipment:** Ensure that an eyewash station is located nearby.

## **Section 8. SAFE HANDLING AND SPILL/LEAK PROCEDURES**

**Spills/Disposal:** Contain spill immediately with an inert material (e.g. absorbent). Transfer liquids/solid diking material to suitable containers for recovery or disposal. Dispose of all wastes in accordance with local, state, and federal regulations.

Keep containers closed when not in use. Wash hands after handling. Wear all recommended personal protective equipment. Store at room temperature.

## **Section 9. REGULATORY DATA**

**DOT Description:** Nonregulated. No reportable quantity.

**TSCA (Toxic Substances Control Act):** Not listed

**SARA Title III (Superfund Amendments and Reauthorization Act)**

**Section 302. Extremely Hazardous Substances List:** Not listed

**Section 312. Hazard Category:** None

**Section: 313. Toxic Chemicals List:** Not listed

## **Section 10. SUPPLIER DATA**

TRI Chemicals

(661) 396-7141 Office

P.O. Box 18

(661) 747-3005 Chemical Emergency

Caliente, CA 93518

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The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, TRI Chemicals makes no warranty, either expressed or implied, with respect to the completeness of continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.

# MATERIAL SAFETY DATA SHEET

## Section 1. PRODUCT IDENTIFICATION

**Product Name:** Dissolved Oxygen Scavenger  
**Description:** Catalyzed solution of inorganic bisulfites

**Date:** May 18, 2000

## Section 2. HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>CAS #</u>	<u>TLV</u>
Blend of inorganic bisulfites, sodium & potassium salts	N/A	5 mg/m <sup>3</sup>

## Section 3. PHYSICAL AND CHEMICAL PROPERTIES

**Specific gravity:** 1.13                      **Appearance:** clear, pale pink liquid  
**Density:** 9.4- 9.5 lbs/gal              **pH:** Approx 4              **Odor:** acrid

## Section 4. FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** Not tested, water based.              **Flammable Limits in Air:** Not tested.  
**Extinguishing Media:** Use any media appropriate for surrounding fire.  
**Special fire Fighting Procedures:** Fire-fighters should use self-contained breathing apparatus and full protective clothing.  
**Unusual fire and Explosion Hazards:** None known.

## Section 5. REACTIVITY HAZARD DATA

**Stability:** Stable under normal use and conditions. Temperature at or near boiling (215 F) causes evolution of sulfur dioxide gas.  
**Incompatibility:** Contact with oxidizing agents may cause strong exothermic reactions. Contact with acids yields sulfur dioxide gas which is toxic and corrosive.  
**Hazardous Decomposition Products:** Sulfur dioxide gas.  
**Hazardous Polymerization:** Will not occur.

## Section 6. HEALTH HAZARD DATA

**Primary Route of Entry:** Skin contact, eye contact and inhalation (of mists).  
**Effects of Overexposure:** Acute/Immediate health hazard.  
**Symptoms of Overexposure:** Irritation, burns. Corrosive to eyes, irritating to skin and respiratory tract. Corrosive to digestive tract and mucous membranes.  
**Carcinogenic Data:** Not listed on any OSHA Standard.

## EMERGENCY FIRST AID PROCEDURES

**Eye Contact:** Flush with flowing water or saline solution for at least 15 minutes. Prompt medical attention is essential. Consult a physician.  
**Skin Contact:** Flush with flowing water for 15 minutes. Remove contaminated clothing and launder before reuse. Get medical attention. Consult a physician if irritation persists.  
**Inhalation:** Move person to fresh air. Administer artificial respiration if breathing has stopped.  
**Ingestion:** If person is conscious, give large quantities of water or milk. Do not induce vomiting. Consult a physician immediately.

Dissolved Oxygen Scavenger, continued.

## **Section 7. CONTROL AND PROTECTIVE MEASURES**

**Eye Protection:** Safety glasses or chemical splash-proof face shield must be worn.

**Skin Protection:** Rubber gloves must be worn. Long sleeved shirt and chemical apron recommended.

**Respiratory Protection:** Not required under normal use. Wear NIOSH/MSHA approved respirator where mists or vapors are generated.

**Ventilation:** General ventilation is sufficient when product is used normally. Use local exhaust where material is heated or mists/vapors occur.

**Other Protection Clothing/Equipment:** Emergency eye wash station and safety shower in the work area is recommended.

## **Section 8. SAFE HANDLING AND SPILL/LEAK PROCEDURES**

**Handling/Storage:** Keep containers closed when not in use. Wash hands after handling. Wear all recommended personal protective equipment. Store at room temperature.

**Spills/Disposal:** Dike large spills. Only trained personnel equipped with NIOSH/MSHA approved, full face piece combination dust/mist and acid gas respirators should be permitted in the area. Reclaim spilled material if possible. Or, dilute spill with large amount of water, then neutralize with soda ash. After all visible traces have been removed, flush area with large amounts of water. Properly neutralized liquid residues (pH 6-9) may be disposed of in waste water treatment facilities which allow the discharge of neutral salt solutions.

## **Section 9. REGULATORY DATA**

**DOT Description:** Corrosive Liquid, Class 8, Bisulfites, Inorganic, Aqueous Solution, UN 2693, PG III  
**TSCA (Toxic Substances Control Act):** All components listed on TSCA inventory.

**SARA Title III (Superfund Amendments and Reauthorization Act)**

**Section 302.** Extremely Hazardous Substances List: No listed components.

**Section 312.** Hazard Category: Immediate/Acute health hazards.

**Section 313.** Toxic Chemicals List: No listed components.

## **Section 10. SUPPLIER DATA**

TRI Chemicals (661) 972-0496 Office  
P.O. Box 305  
Keene, CA 93531

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# MATERIAL SAFETY DATA SHEET

## Section 1. PRODUCT IDENTIFICATION

**Product Name:** Produced Water Scale Inhibitor

**Date:** July 14, 2000

**Description:** Polyacrylate/Phosphonate Scale Inhibitor

## Section 2. HAZARDOUS INGREDIENTS

(Neutralized components are non-hazardous.)

Ingredient	CAS #	TLV
None		

## Section 3. PHYSICAL AND CHEMICAL PROPERTIES

**Specific gravity:** 1.06

**Appearance:** Nearly colorless liquid

**Density:** 8.65 lbs./gallon

**pH:** 7-8

**Odor:** Slightly acrid odor

## Section 4. FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** Not tested, water based material. **Flammable Limits in Air:** Not tested.

**Extinguishing Media:** Use extinguishing media appropriate for surrounding materials.

**Special fire Fighting Procedures:** Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

**Unusual fire and Explosion Hazards:** None known.

## Section 5. REACTIVITY HAZARD DATA

**Stability:** Stable under normal use and conditions.

**Incompatibility:** Avoid contact with strong oxidizing agents, alkalis.

**Conditions to Avoid:** Heating undiluted chemical over 212 F and breathing fumes from heated solution.

**Hazardous Decomposition Products:** CO, CO<sub>2</sub>

**Hazardous Polymerization:** Will not occur.

## Section 6. HEALTH HAZARD DATA

**Primary Route of Entry:** Skin contact, eye contact, and inhalation.

**Effects of Overexposure:** Corrosive to eyes and irritating or corrosive to skin. May cause irritation or corrosion to mucous membranes and the lungs.

**Carcinogenic Data:** Not listed on any OSHA Standard.

**Toxicity:** No data on human toxicity.

## EMERGENCY FIRST AID PROCEDURES

**Eye Contact:** Flush with flowing water or saline solution for 15 minutes. Get medical attention.

**Skin Contact:** Wash exposed areas with plenty of soap and water. Repeat washing. Remove contaminated clothing and wash before reuse. Consult a physician if irritation persists.

**Inhalation:** Move person to fresh air. Give artificial respiration if breathing has stopped.

**Ingestion:** If person is conscious, administer one or two glasses of water or milk. Avoid giving alcohol or alcohol related products. Do not induce vomiting. Seek medical assistance immediately.

Produced Water Scale Inhibitor, continued.

## **Section 7. CONTROL AND PROTECTIVE MEASURES**

**Eye Protection:** Splash proof chemical goggles or face shield must be worn.

**Skin Protection:** Wear rubber gloves. Long sleeves and rubber apron are recommended.

**Respiratory Protection:** NIOSH/OSHA approved respirator recommended.

**Ventilation:** General ventilation is sufficient when used normally. Use local exhaust when material is heated or mists/vapors occur.

**Other Protection Clothing/Equipment:** Emergency eye wash station and safety shower in the work area are strongly recommended.

## **Section 8. SAFE HANDLING AND SPILL/LEAK PROCEDURES**

**Handling and Storage:** Keep containers closed when not in use. Avoid splashing on skin, eyes, or mouth. Wash hands after handling. Avoid breathing fumes, especially in closed, heated areas. Wear all recommended personal protective equipment. Store at room temperature.

**Spills/Disposal:** Collect spills with absorbent material and place in lidded container. Wear self-contained breathing apparatus if extreme heat is encountered. Dispose of material in accordance with local, state and federal regulations.

## **Section 9. REGULATORY DATA**

**DOT Description:** Not Restricted Liquid

**TSCA (Toxic Substances Control Act):** All components listed on TSCA Inventory.

**SARA Title III (Superfund Amendments and Reauthorization Act)**

**Section 302. Extremely Hazardous Substances List:** No listed components.

**Section 312. Hazard Category:** Immediate/Acute Health Hazard.

**Section: 313. Toxic Chemicals List:** No listed components above *de minimus* levels.

## **Section 10. SUPPLIER DATA**

TRI Chemicals  
P.O. Box 305  
Keene, CA 93531

(661) 972-0496 Office/Emergency

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# MATERIAL SAFETY DATA SHEET

## Section 1. PRODUCT IDENTIFICATION

**Product Name:** Well Wash/Clay Treatment  
**Description:** Surfactant/Quaternary Amine/Solvent Mixture

**Date:** 10/30/02

## Section 2. HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>CAS #</u>	<u>TLV</u>
Alkyl dimethyl benzyl ammonium chloride		
Aromatic solvent mixture		

## Section 3. PHYSICAL AND CHEMICAL PROPERTIES

**Specific gravity:** 0.91-0.93  
**Percent Volatile:** 90%  
**Solubility in Water:** Slight

**Appearance:** clear, tan-colored liquid  
**Odor:** Fruity odor.  
**Vapor Pressure:** 0.9 mm Hg at 20C

## Section 4. FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** Less than 100 °F  
**Extinguishing Media:** Dry chemical, water spray (fog), foam, or carbon dioxide.  
**Special fire Fighting Procedures:** As for petroleum products. Use self-contained breathing apparatus. Spray storage vessels with water to maintain temperature below 100C/212F.  
**Unusual fire and Explosion Hazards:** None known.

**Flammable Limits in Air:** Not Established

## Section 5. REACTIVITY HAZARD DATA

**Stability:** Stable.  
**Incompatibility:** Avoid contact with strong oxidizing and reducing agents.  
**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, and oxides of sulfur and nitrogen may be formed on combustion.  
**Hazardous Polymerization:** Will not occur.

## Section 6. HEALTH HAZARD DATA

**Primary Route of Entry:** Inhalation  
**Effects of Overexposure:** Causes irritation to the nose, throat and lungs.  
**Symptoms of Overexposure:** Headache, dizziness, nausea, and decreased blood pressure may be experienced.  
**Carcinogenic Data:** Contains no known carcinogens at concentrations greater than or equal to 0.1%.  
**Toxicity:** Oral LD50 (rat): >9640 mg/kg, Dermal LD50 (rabbit): >4820 mg/kg.

## EMERGENCY FIRST AID PROCEDURES

**Eye Contact:** Begin immediate eye irrigation with cool water.

**Skin Contact:** Remove contaminated clothing. Wash affected areas with soap and water. Seek medical advice. Wash clothing before re-wearing.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** If swallowed, give two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## Section 7. CONTROL AND PROTECTIVE MEASURES

**Eye Protection:** Chemical goggles if exposure is possible.

**Skin Protection:** Wear gloves that are resistant to chemical penetration.

**Respiratory Protection:** Full facepiece, NIOSH approved organic vapor respirator.

**Ventilation:** At source of vapor.

**Other Protection Clothing/Equipment:** If repeated or prolonged skin contact or contamination of clothing is likely, chemical resistant protective clothing should be worn.

## Section 8. SAFE HANDLING AND SPILL/LEAK PROCEDURES

**Spills/Disposal:** Ventilate area. Remove sources of ignition. Contain any spills with dikes or absorbents to prevent entry into sewers or streams. Take up small spills with dry chemical absorbent. Large spills may be taken up with pump or vacuum and finished off with dry chemical absorbent. May require excavation of contaminated soil. As a waste, this product is hazardous.

Keep containers closed when not in use. Wash hands after handling. Wear all recommended personal protective equipment. Store at room temperature in a dry, well ventilated area away from sources of ignition..

## Section 9. REGULATORY DATA

DOT Description: Flammable liquids, n.o.s. (contains aromatic solvents, alcohols, glycol ethers)  
NA1993, II.

TSCA (Toxic Substances Control Act):

SARA Title III (Superfund Amendments and Reauthorization Act)

Section 302. Extremely Hazardous Substances List: None.

Section 312. Hazard Category: Immediate (X), Delayed (X), Fire (X)

Section: 313. Toxic Chemicals List:

<u>Section 313 Component</u>	<u>CAS #</u>
ethylene glycol monobutyl ether	111-76-2
alkylamido imidazoline	Trade Secret

## Section 10. SUPPLIER DATA

TRI Chemicals

(661) 396-7141 Office

P.O. Box 305

(661) 972-0496 Chemical Emergency

Keene, CA 93531

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