

## MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 2

Revision date: 18 August 2010

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Code:** B317  
**Product Name:** Scale Inhibitor B317  
**Company Identification:** Schlumberger Technology Corporation  
110 Schlumberger Drive  
Sugar Land, Texas 77478, USA  
Telephone: 1-281-285-7873  
**Emergency Telephone Number:** USA: +1-281-595-3518 (24hr)

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**Main physical hazards:** No classified physical hazards.  
**Main health hazards:** Repeated or prolonged exposure may cause irritation of eyes and skin.  
**Precautions:** Avoid contact with the skin and the eyes. Wear suitable protective equipment. Keep container tightly closed.  
**HMS classification:** Health: 1 Flammability: 0 Physical hazard: 0

**Form:** Liquid

**Color:** Clear to hazy yellow

**Odor:** None

**Principle routes of exposure:**

Eye contact. Skin contact.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %- Range
Trisodium ortho phosphate	7601-54-9	1 - 5
Ethane-1,2-diol	107-21-1	1 - 5

### 4. FIRST AID MEASURES

**Eye contact:** Immediately flush eyes with water for 5 minutes while holding eyelids open. Seek medical attention if irritation occurs.  
**Skin contact:** Rinse with water. If symptoms persist, call a physician.  
**Ingestion:** Do not induce vomiting without medical advice. Obtain medical attention.  
**Inhalation:** Move to fresh air in case of accidental inhalation of vapors. Consult a physician if necessary.

### 5. FIRE-FIGHTING MEASURES

**Flash point:** >100 °C / >212 °F

**Method:** Pensky-Martens CC  
**Autoignition temperature:** No data available.  
**Flammability limits in air:**  
**Lower:** No information available.  
**Upper:** No information available.  
**Oxidizing properties:** No data available

**Suitable extinguishing media:**  
Use extinguishing media appropriate for surrounding material.

**Extinguishing media which must not be used for safety reasons:**  
Not applicable.

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:**  
Carbon oxides.

**Special protective equipment for firefighters:**  
Wear self-contained breathing apparatus and protective suit.

**NFPA rating:**  
**Health:** 1  
**Flammability:** 0  
**Instability:** 0  
**Special:** None

## 6. ACCIDENTAL RELEASE MEASURES

**Main physical hazards:** No classified physical hazards.  
**Personal precautions:** Avoid contact with skin and eyes. Wear suitable protective equipment.  
**Methods for cleaning up:** Dam up. Put into suitable containers for disposal.  
**Environmental precautions:** Prevent product from entering drains. Prevent entry into sewage.

## 7. HANDLING AND STORAGE

**Handling:**  
**Precautions:** Avoid contact with the skin and the eyes. Wear suitable protective equipment. Keep container tightly closed.  
**Safe handling advice:** Wear suitable protective equipment.  
**Technical measures/ storage conditions:** Keep away from direct sunlight. Keep container tightly closed.  
**Packaging requirements:** Keep in properly labelled containers.  
**Incompatible products:** No information available.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering measures to reduce exposure:** Control the source. Enclosure of the process. Other suitable methods.  
**Hygiene measures:** Avoid prolonged or repeated contact with skin. Wear suitable protective equipment.  
**Respiratory protection:** None normally needed  
**Eye protection:** Tightly fitting safety goggles.  
**Hand protection:** Neoprene. Nitrile. Butyl. PVC.  
**Skin and body protection:** Chemical resistant apron.

### Occupational Exposure Limits

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / Ceiling	STEL	ACGIH - Skin	TWA / C	STEL	Final PELs - Skin
Trisodium ortho phosphate	-	-	-	-	-	-
Ethane-1,2-diol	100 mg/m <sup>3</sup> C	-	-	-	-	-

**Particles Not Otherwise Regulated/Specified [PNOR or PNOS] (insoluble or poorly soluble):**

- OSHA PEL's for Inert or Nuisance Dust are covered by PNOR limits: respirable fraction: 5 mg/m<sup>3</sup>; total dust 15 mg/m<sup>3</sup>.
- ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m<sup>3</sup>, respirable particulate, and 10 mg/m<sup>3</sup>, inhalable particles.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Liquid
<b>Color:</b>	Clear to hazy yellow
<b>Odor:</b>	None
<b>Odor threshold:</b>	No information available.
<b>pH:</b>	4
<b>Boiling point/range:</b>	No data available.
<b>Flash point:</b>	>100 °C / >212 °F
<b>Method:</b>	Pensky-Martens CC.
<b>Flammability limits in air:</b>	
<b>Lower:</b>	No information available.
<b>Upper:</b>	No information available.
<b>Bulk density:</b>	Not applicable.
<b>Melting point/range:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Solubility:</b>	
<b>Water solubility:</b>	Soluble.
<b>Fat solubility:</b>	No information available.
<b>Partition coefficient (n-octanol/water):</b>	Not applicable.
<b>Relative density:</b>	No information available
<b>Vapor pressure:</b>	Similar to water.
<b>Vapor density:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Evaporation rate:</b>	Similar to water.
<b>% Volatile (VOC):</b>	No data available.

## 10. STABILITY AND REACTIVITY

**Stability:**

Stable under recommended storage conditions.

**Conditions to avoid:**

Freezing.

**Incompatibility with other substances:**

None known.

**Hazardous decomposition products:**

Carbon oxides.

**Hazardous polymerization:**

Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION****PRODUCT TOXICOLOGICAL INFORMATION**

Information given is based on data on the components and the toxicology of similar products.

**Acute Health Hazard**

<b>Eye contact:</b>	May be mildly irritating.
<b>Skin contact:</b>	Prolonged skin contact may cause skin irritation.
<b>Ingestion:</b>	Swallowing large amounts may be harmful.
<b>Inhalation:</b>	No effect expected.
<b>Sensitization - lung:</b>	Not known to cause allergic reaction.
<b>Sensitization - skin:</b>	Not known to cause allergic reaction.

**Chronic Health Hazard**

<b>Carcinogenic effects:</b>	Not listed by IARC, USA NTP, or USA OSHA.
<b>Mutagenic effects:</b>	See COMPONENT TOXICOLOGICAL INFORMATION below.
<b>Teratogenic effects:</b>	Not known to cause birth defects or have a deleterious effect on a developing fetus.
<b>Reproductive toxicity:</b>	Not known to adversely affect reproductive functions and organs.
<b>Target organ effects:</b>	See COMPONENT TOXICOLOGICAL INFORMATION below.

**COMPONENT TOXICOLOGICAL INFORMATION**

Component	Target Organ Effects	LD50 / LC50
Trisodium ortho phosphate	-	> 2000 mg/kg (Oral LD50; Rat) = 2.16 mg/L (Inhalation LC50; Rat) 1 h = 2 mg/kg (Dermal LD50; Rabbit)
Ethane-1,2-diol	respiratory system, skin, eyes, CNS	= 4000 mg/kg (Oral LD50; Rat) = 9530 µL/kg (Dermal LD50; Rabbit)

Component	IARC Group 1 or 2:	ACGIH - Carcinogens:	OSHA Listed Carcinogens	NTP:
Trisodium ortho phosphate	-	-	-	-
Ethane-1,2-diol	-	A4 - Not Classifiable as a Human Carcinogen (aerosol)	-	-

Component	OTHER TOXICOLOGICAL INFORMATION
Ethane-1,2-diol	Mutagen - somatic cells. Long term exposure by inhalation in controlled animal studies showed sense organ effect, especially eyes, with corneal damage. Large oral doses caused liver, kidney, ureter and bladder effects in animal studies. Fetotoxic and teratogenic effects observed in controlled animal studies. Skin sensitivity: two cases of sensitization to ethylene glycol in occupational setting have been reported. Central nervous system (CNS) depressant.

**12. ECOLOGICAL INFORMATION****PRODUCT INFORMATION**

**COMPONENT INFORMATION**

Ethane-1,2-diol

<b>Bioaccumulation:</b>	Does not bioaccumulate
<b>Persistence / degradability:</b>	Readily biodegradable.
<b>Freshwater Fish Species Data</b>	EC50 96 h (Selenastrum capricornutum) = 6500 - 13000 mg/L
<b>Freshwater Fish Species Data</b>	LC50 96 h (Oncorhynchus mykiss) = 41000 mg/L
	LC50 96 h (Oncorhynchus mykiss) = 14-18 mg/L
	LC50 96 h (Lepomis macrochirus) = 27540 mg/L
	LC50 96 h (Oncorhynchus mykiss) = 40761 mg/L
	LC50 96 h (Pimephales promelas) = 40000-60000 mg/L
	LC50 96 h (Poecilia reticulata) = 16000 mg/L
	LC50 96 h (Oncorhynchus mykiss) = 41000 mg/L
<b>Water Flea Data</b>	EC50 48 h (water flea) = 46300 mg/L
<b>Other information:</b>	Listed on PLONOR list of OSPAR

**13. DISPOSAL CONSIDERATIONS****Waste from residues / unused products:**

Dispose of in accordance with local regulations.

**Contaminated packaging:**

If reusable containers are used, send them back to the product supplier, after the required rinsing.

**EPA RCRA Hazardous Waste Code:**

None

**14. TRANSPORT INFORMATION****DOT:**

<b>CERCLA RQ:</b>	None
<b>Hazard class:</b>	Not regulated.
<b>Proper shipping name:</b>	Not regulated
<b>Label(s):</b>	None required.

**IMDG/IMO**

<b>Shipping name:</b>	Not regulated.
<b>UN number:</b>	None

**ICAO/IATA**

<b>Shipping name:</b>	Not regulated.
<b>UN number:</b>	None

**TDG (Canada):**

<b>Shipping name:</b>	Not regulated.
<b>PIN:</b>	None

**Note 1:**

For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.

**15. REGULATORY INFORMATION****International Chemical Inventories**

**USA, Toxic Substances Control Act inventory (TSCA):** This product complies with TSCA requirements.

**Canada, Domestic Substance List (DSL):** This product complies with DSL requirements.

**U.S.A. Regulations****OSHA Hazard Communication Standard:**

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

**EPA RCRA Hazardous Waste Code:**

None

**EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):**

<b>Immediate (Acute) Health Hazard:</b>	None
<b>Delayed (Chronic) Health Hazard:</b>	None
<b>Fire Hazard:</b>	None
<b>Sudden Release or Pressure Hazard:</b>	None
<b>Reactive Hazard:</b>	None

**EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):**

This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

**Additional Regulatory Information**

Trisodium ortho phosphate

**EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4):** None

**CERCLA/SARA - Hazardous Substances and their RQs:** 2270 kg final RQ

5000 lb final RQ

**EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40):** None

**California Proposition 65:** None

Ethane-1,2-diol

**EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4):** Listed

**CERCLA/SARA - Hazardous Substances and their RQs:** 2270 kg final RQ

5000 lb final RQ

**EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40):** None

**California Proposition 65:** None

**International Hazard Class****WHMIS Hazard Class:**

Non-controlled product.

**16. OTHER INFORMATION****Current references:**

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati OH.*
2. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer. Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Health and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational Safety and Health. Cincinnati, OH.*
5. LOLI Database.

**Explanation of terms:**

ACGIH:	American Conference of Governmental Industrial Hygienist
ACGIH-TL:	Threshold Limit Value
DSL:	Domestic Substance List
HMIRC:	Hazardous Materials Information Review Commission
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
NIOSH:	National Institute of Occupational Safety & Health
NIOSH-REL:	Recommended Exposure Limit
OSHA:	Occupational Safety & Health Administration
OSHA-PEL:	Permissible Exposure Limit
TSCA:	Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling Limit; units: [mg/m<sup>3</sup>]

**ACGIH Notations:**

"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.

"A" notation indicates carcinogenicity as follows:

ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.

"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

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**End of the Material Safety Data Sheet**