

# MATERIAL SAFETY DATA SHEET

(USA)

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

Version: 2

Revision date: 16 June 2011

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

**Product Code:** L071

**Product Name:** L071 Temporary Clay Stabilizer

**Use of the Substance/Preparation:** For industrial use only. Additive in oilfield applications.

**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:** None known.

**Main health hazards:** May be mildly irritating to eyes. May be mildly irritating to skin.

**Precautions:** No special precautions required.

**HMIS classification:** Health: 1 Flammability: 0 Physical hazard: 0

**Form:** Liquid                      **Color:** Clear colorless                      **Odor:** Amine-like

**Principle routes of exposure:**  
Skin contact. Inhalation. Eye contact.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %- Range
Cholinium chloride	67-48-1	70-75

## 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:** Wash off with soap and water. Rinse with water.

**Ingestion:** Do not induce vomiting without medical advice. Seek medical attention. Never give anything by mouth to an unconscious person.

**Inhalation:** Move to fresh air. Consult a physician if necessary.

**5. FIRE-FIGHTING MEASURES**

**Flash point:** Does not flash.  
**Autoignition temperature:** Not applicable.  
**Flammability limits in air:**  
    **Lower:** Not applicable  
    **Upper:** Not applicable  
**Oxidizing properties:** None known.

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

**Extinguishing media which must not be used for safety reasons:**  
None known.

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:**  
When heated strongly or burned, oxides of carbon, nitrogen oxides, ammonia and harmful organic chemical fumes are released. Chlorine, chlorine oxides, hydrogen chloride.

**Special protective equipment for firefighters:**  
Use self-contained breathing apparatus in closed areas. Wear protective fire fighting clothing and avoid breathing vapors.

**NFPA Rating:**

<b>Health:</b>	<b>2</b>
<b>Flammability:</b>	<b>1</b>
<b>Instability:</b>	<b>0</b>
<b>Special:</b>	<b>None</b>

**6. ACCIDENTAL RELEASE MEASURES**

**Main physical hazards:** None known.  
**Personal precautions:** Wear suitable protective equipment.  
**Methods for cleaning up:** Dam up. Put into suitable containers for disposal.  
**Environmental precautions:** None known.

**7. HANDLING AND STORAGE**

**Handling:**  
    **Precautions:** No special precautions required.  
    **Safe handling advice:** Avoid contact with eyes.  
**Technical measures/  
storage conditions:** No special storage conditions required.  
**Packaging requirements:** High density polyethylene (HDPE) drum or can.  
**Incompatible products:** Strong acids. Strong bases. Oxidizing agents.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering measures to reduce exposure:</b>	No special technical protective measures required.
<b>Hygiene measures:</b>	Exercise reasonable care and cleanliness.
<b>Respiratory protection:</b>	None normally needed.
<b>Eye protection:</b>	It is good practice to wear goggles when handling any chemical.
<b>Hand protection:</b>	Impervious gloves. Rubber gloves. PVC disposable gloves.
<b>Skin and body protection:</b>	No special precautions required.

### Occupational Exposure Limits

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / C	STEL	Skin Notation	TWA / C	STEL	Final PELs - Skin
Cholinium chloride	-	-	-	-	-	-

#### 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>Chemical characterization:</b>	Aqueous solution of organic compounds.
<b>Form:</b>	Liquid
<b>Color:</b>	Clear colorless
<b>Odor:</b>	Amine-like
<b>Odor threshold:</b>	Not applicable.
<b>pH:</b>	6.5 - 8.5
<b>Boiling point/range:</b>	No data available.
<b>Flash point:</b>	Does not flash.
<b>Flammability limits in air:</b>	
<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable
<b>Bulk density:</b>	Not applicable.
<b>Melting point/range:</b>	< 0 °C / 32 °F
<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>	1.1
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Evaporation rate:</b>	No data available.
<b>% Volatile (VOC):</b>	None.

**10. STABILITY AND REACTIVITY****Stability:**

Stable under recommended storage conditions.

**Conditions to avoid:**

None known.

**Incompatibility with other substances:**

Acids. Bases. Oxidizers.

**Hazardous decomposition products:**

When heated strongly or burned, oxides of carbon, nitrogen oxides, ammonia and harmful organic chemical fumes are released. Chlorine, chlorine oxides, hydrogen chloride.

**Hazardous polymerization:**

Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION****PRODUCT TOXICOLOGICAL INFORMATION****Acute Health Hazard**

<b>Eye contact:</b>	May be mildly irritating.
<b>Skin contact:</b>	May be mildly irritating.
<b>Ingestion:</b>	May be mildly irritating.
<b>Inhalation:</b>	This is an unlikely route of exposure.
<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>	None known.
<b>Teratogenic effects:</b>	None known.
<b>Reproductive toxicity:</b>	None known.
<b>Target organ effects:</b>	No information available.

**COMPONENT TOXICOLOGICAL INFORMATION**

Component	Target Organ Effects	LD50 / LC50
Cholinium chloride	-	= 3400 mg/kg (Oral LD50; Rat)

Component	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA Listed Carcinogens	NTP
Cholinium chloride	-	-	-	-

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

**COMPONENT INFORMATION**

Cholinium chloride

<b>Bioaccumulation:</b>	No information available
<b>Persistence / degradability:</b>	No information available
<b>Freshwater Fish Species Data</b>	500 mg/L EC50 (Desmodesmus subspicatus) = 72 h
<b>Freshwater Fish Species Data</b>	10000 mg/L LC50 (Leuciscus idus) = 96 h
<b>Water Flea Data</b>	500 mg/L EC50 (Daphnia magna Straus) = 48 h
	320 mg/L EC50 (Daphnia magna) = 48 h

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

Dispose of in accordance with local regulations.

**Contaminated packaging:**

Dispose of in accordance with local regulations. 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****Shipping name:** Not regulated.**UN number:** None**ICAO/IATA****Shipping name:** Not regulated.**UN number:** None**TDG (Canada):****Shipping name:** Not regulated.  
**PIN:** 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.

**IMPORTS, USA:**

No import volume restrictions.

**Canada, Domestic Substance List (DSL):**

This product complies with DSL requirements.

**IMPORTS, Canada:**

No import volume restrictions.

**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**

Cholinium chloride

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

**CERCLA/SARA - Hazardous Substances and their RQs:** None

**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.

<b>Section(s) revised:</b>	2
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**End of the Material Safety Data Sheet**