

## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Code:** 040114  
**Product Name:** OP-T-Con CS-3001  
**Category:** Clay Control  
**Company Name:** OptiFrac Chemical Services  
 910, 640 -5th Avenue SW  
 Calgary, AB T2P 3G4  
**Phone Number:** (403)237-8900  
**Emergency Contact:** 24 hour Emergency #: (CANUTEC) (613)996-6666

### 2. HAZARDS IDENTIFICATION

**Skin Corrosion/Irritation, Category 2**  
**Serious Eye Damage/Eye Irritation, Category 2A**  
**Specific Target Organ Toxicity (single exposure), Category 3**



**GHS Signal Word:** **Warning**

**GHS Hazard Phrases:** H315 - Causes skin irritation.  
 H319 - Causes serious eye irritation.  
 H335 - May cause respiratory irritation.

**GHS Precaution Phrases:** P264 - Wash hands thoroughly after handling.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P362+364 - Take off contaminated clothing and wash it before reuse.

**GHS Response Phrases:** P302+352 - IF ON SKIN: Wash with plenty of soap and water.  
 P332+313 - If skin irritation occurs, get medical advice/attention.  
 P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+313 - If eye irritation persists, get medical advice/attention.  
 P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P312 - Call a POISON CENTER/doctor if you feel unwell.

**GHS Storage and Disposal Phrases:** P403+233 - Store container tightly closed in well-ventilated place.  
 P405 - Store locked up.  
 P501 - Dispose of contents/container to an approved waste disposal plant.

**Hazard Rating System:**

|              |   |
|--------------|---|
| HEALTH       | 2 |
| FLAMMABILITY | 0 |
| PHYSICAL     | 0 |
| PPE          | B |

**HMIS:**



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**Potential Health Effects (Acute and Chronic):** Chronic: May cause liver and kidney damage. Repeated exposure may cause damage to the spleen. Laboratory experiments have shown mutagenic effects. Chronic exposure may cause blood effects. Exposure to high concentrations may cause central nervous system depression.

**Inhalation:** Causes respiratory tract irritation. May be harmful if inhaled.

**Skin Contact:** Causes skin irritation. May be harmful if absorbed through the skin.

**Eye Contact:** Causes eye irritation.

**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| CAS #   | Ingredient(s)    | Concentration |
|---------|------------------|---------------|
| 67-48-1 | Choline chloride | 50.0 -80.0 %  |

### 4. FIRST AID MEASURES

#### Emergency and First Aid Procedures:

**In Case of Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Seek medical advice/attention immediately.

**In Case of Skin Contact:** Wash exposed area with soap and water thoroughly. Remove contaminated clothing and wash before reuse. Seek medical advice/attention if irritation develops or persists.

**In Case of Eye Contact:** Immediately flush eyes with running water for at least 15 minutes. Remove contact lenses if present after the first 5 minutes. Seek medical advice/attention if irritation develops or persists.

**In Case of Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Never give anything to and unconscious person. Seek medical advice/attention if you feel unwell.

**Note to Physician:** Based on the individual reactions of the patient, the physician's judgment should be used to treat symptomatically and supportively.

### 5. FIRE FIGHTING MEASURES

**Flash Pt:** NP Method Used: Estimate

**Explosive Limits:** LEL: UEL:

**Autoignition Pt:** NP

**Suitable Extinguishing Media:** Product is not flammable under normal conditions. Use extinguishing media suitable for source of the fire. Use water spray to cool the containers exposed to the fire.

**Fire Fighting Instructions:** No specific measures required. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Flammable Properties and Hazards:** Product is not combustible. Heating could cause decomposition of the product and expansion that could lead to rupture of the container.



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### 6. ACCIDENTAL RELEASE MEASURES

**Protective Precautions, Protective Equipment and Emergency Procedures:** No specific precautions necessary. Wear appropriate personal protection equipment.

**Environmental Precautions:** No specific precautions necessary. Observe local and federal regulations.

**Steps To Be Taken In Case Material Is Released Or Spilled:** Collect liquid by absorbing with an inert material (e.g. vermiculite, dry sand, earth), clean contaminated surface thoroughly, and place in a container for disposal according to local regulations.

### 7. HANDLING AND STORAGE

**Precautions To Be Taken in Handling:** Avoid prolonged or repeated contact with eyes, skin, or clothing. Wash thoroughly after handling. Avoid breathing product vapors or mists. Use with adequate ventilation. Keep containers closed when not in use.

**Precautions To Be Taken in Storing:** Store in a dry, cool, and well ventilated away from heat sources and incompatible materials. Keep containers securely sealed. Protect containers from physical damage and check regularly for leaks.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| CAS #   | Components (Chemical Name)  | OSHA TWA | ACGIH TWA | Other Limits |
|---|---|----------|-----------|--------------|
| 67-48-1   | Choline chloride  |          |           |              |
| <b>Respiratory Equipment (Specify Type):</b>    | No Specific requirements. A risk assessment should be made to determine if respiratory protection is necessary.   |          |           |              |
| <b>Eye Protection:</b>                          | Safety glasses with side shields.   |          |           |              |
| <b>Protective Gloves:</b>                       | Wear appropriate impermeable gloves.  |          |           |              |
| <b>Other Protective Clothing:</b>               | No Specific requirements. A risk assessment should be made to determine if additional skin protection is necessary.   |          |           |              |
| <b>Engineering Controls (Ventilation etc.):</b> | Use local and/or general exhaust ventilation to maintain airborne concentrations below irritating levels or airborne exposure limits, whichever is lower. Local exhaust is generally preferred because it can control the emission of the contaminant at its source, preventing dispersion of it into the general work area.  |          |           |              |
| <b>Work/Hygienic/Maintenance Practices:</b>     | An eye wash station should be accessible in the immediate area of use. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. |          |           |              |



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### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical States:** [ ] Gas [ ] Liquid [ X ] Solid  
**Appearance and Odor:** Clear.  
Mild Odor.  
**Freeze Point/Pour Point:** < -40.00 F (-40.0 C)  
**Boiling Point:** > 210.00 F (98.9 C)  
**Autoignition Pt:** NP  
**Flash Pt:** NP Method Used: Estimate  
**Explosive Limits:** LEL: UEL:  
**Specific Gravity (Water = 1):** 1.103+/-0.05  
**Vapor Pressure (vs. Air or mm Hg):** 5 MM\_HG at 100.0 F (37.8 C)  
**Vapor Density (vs. Air = 1):** >1 (Air = 1.0)  
**Evaporation Rate:**  
**Solubility in Water:**  
**Viscosity:** < 100 cPs  
**pH:** 6.5 - 8.0  
**Percent Volatile:** No data.

### 10. STABILITY AND REACTIVITY

**Reactivity:** Under normal conditions of storage and use, hazardous reactions will not occur.  
**Stability:**  
**Conditions To Avoid - Instability:** Unstable [ ] Stable [ X ]  
Excess heat.  
**Incompatibility - Materials To Avoid:** Reactive or incompatible with the following materials: Strong acids, Strong bases, Mild or Galvanized Steel.  
**Hazardous Decomposition or Byproducts:**  
**Possibility of Hazardous Reactions:** Decomposition by fire may produce the following hazardous gases and vapors: Carbon oxides, oxides of nitrogen, chlorine.  
**Conditions To Avoid - Hazardous Reactions:** Will occur [ ] Will not occur [ X ]



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### 11. TOXICOLOGICAL INFORMATION

**Toxicological Information:** Epidemiology: No information found.  
 Teratogenicity: No information available. Reproductive Effects: Mutagenicity: Mutagenic effects have occurred in experimental animals.  
 Neurotoxicity:  
 CAS# 67-48-1:  
**Carcinogenicity/Other Information:** Acute toxicity, LD50, Oral, Rat, 3400. MG/KG.  
 Result:  
 Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Chromodacryorrhea.  
 Behavioral: Excitement.  
 Lungs, Thorax, or Respiration: Respiratory depression.  
 - Proceedings of the Society for Experimental Biology and Medicine., Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 58,87, 1945  
 CAS# 67-48-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

| CAS #   | Ingredient(s)    | NTP | IARC | ACGIH | OSHA |
|---------|------------------|-----|------|-------|------|
| 67-48-1 | Choline chloride |     |      |       |      |

### 12. ECOLOGICAL INFORMATION

**General Ecological Information:** Environmental: No information available.  
 Physical: No information available.  
 Other: Do not empty into drains.

**Results of PBT and vPvB assessment:** CAS# 67-48-1:  
 Effective concentration to 50% of test organisms., Water Flea (Daphnia magna), 320.0 MG/L, 48 H, Intoxication., Water temperature: 20.00 C C, pH: 8.20, Hardness: ~210.00 MG/L.  
 Result:  
 Age Effects.  
 - Aquatic Toxicity of Compounds that may be Carried by Ships (Marpol 19733 Annex II). A Progress Report for 1985, Adema, D.M.M., 1985

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
 RCRA P-Series: None listed.  
 RCRA U-Series: None listed.

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### 14. TRANSPORT INFORMATION

**LAND TRANSPORT (US DOT):**

DOT Proper Shipping Name: Not Regulated.

DOT Hazard Class:

UN/NA Number:

**LAND TRANSPORT (Canadian TDG):**

TDG Shipping Name: Not Regulated.

UN Number:

Hazard Class:

TDG Classification:

**MARINE TRANSPORT (IMDG/IMO):**

IMDG/IMO Shipping Name: Not Regulated.

**AIR TRANSPORT (ICAO/IATA):**

ICAO/IATA Shipping Name: Not Regulated.

### 15. REGULATORY INFORMATION

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

| CAS #   | Ingredient(s)    | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|---------|------------------|--------------|-----------|--------------|
| 67-48-1 | Choline chloride | No           | No        | No           |

**This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:**

|   |  |                                   |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Acute (immediate) Health Hazard   |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Chronic (delayed) Health Hazard   |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Fire Hazard                       |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Sudden Release of Pressure Hazard |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Reactive Hazard                   |

| CAS #   | Ingredient(s)    | Canadian NPRI | Canadian IDL | Canadian DSL |
|---------|------------------|---------------|--------------|--------------|
| 67-48-1 | Choline chloride | No            | No           | Yes          |

**Other US EPA or State Lists**

CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

**International Regulatory Lists**

CAS # 67-48-1 Ingredient(s) Choline chloride

**Canadian WHMIS Classification:**



CLASS D, DIVISION 2, SUBDIVISION B: Toxic Materials (Mutagenicity, skin sensitization, irritation, etc.)



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### 16. OTHER INFORMATION

**Revision Date:** 02/17/2015

**Additional Information About**

**This Product:**

**Company Policy or**

**Disclaimer:**

The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to the accuracy or completeness of this information, whether originating with this company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable and suitable to their circumstances. The conditions or methods of handling, storage, use and disposal of the product and container 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 or use of this information or product. If the product is used as a component in another product, this information may not be applicable.