

## Material Safety Data Sheet

### Choline Chloride

Sheet No.: 136001

Revision Date: 27/07/2005

#### 1. Product Identification

**Synonyms:** Ethanaminium,2-hydroxy-N,N,N-trimethyl-,chloride; Biocolina; Hepacholine; Lipotril; Choline Chlorhydrate.

**CAS No.:** 67-48-1

**Molecular Weight:** 139.63

**Chemical Formula:** HOCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>3</sub>CL

#### 2. Composition/Information on Ingredients

Ingredient CAS No Percent

Choline Chloride powder 67-48-1 50% Min.

Choline Chloride liquid 67-48-1 70% Min.

#### 3. Hazards Identification

**Emergency Overview:**

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

**Potential Health Effects:**

Information on the human health effects from exposure to this substance is limited.

**Inhalation:**

No information found, but compound should be handled as a potential health hazard.

**Ingestion:**

No information found, but compound should be handled as a potential health hazard.

**Skin Contact:**

May cause irritation with redness and pain.

**Eye Contact:**

May cause irritation, redness and pain.

**Chronic Exposure:**

No information found.

**Aggravation of Pre-existing Conditions:**

No information found.

#### 4. First Aid Measures

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## **Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

## **Ingestion:**

Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

## **Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

## **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

## **5. Fire Fighting Measures**

### **Fire:**

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

### **Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

### **Fire Extinguishing Media:**

Water spray, dry chemical, alcohol foam, or carbon dioxide.

### **Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## **6. Accidental Release Measures**

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

## **7. Handling and Storage**

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they

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retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

None established.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear protective gloves and clean body-covering clothing.

### **Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

### **Appearance:**

- Solid forms: White or olive brown dry powder or granule with hygroscopic.
- Liquid forms: Colorless and hyaline gooey liquid with special bad smell.

### **Odor:**

Slight amine odor.

### **Solubility:**

Soluble in water if in solid forms.

### **Specific Gravity:**

No information found.

### **pH:**

Aqueous solution is neutral or slightly acid.

### **% Volatiles by volume @ 21C (70F):**

0

### **Boiling Point:**

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No information found.

**Vapor Density (Air=1):**

No information found.

**Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

May produce carbon monoxide, carbon dioxide, nitrogen oxides and hydrogen chloride when heated to decomposition.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong oxidizers.

**Conditions to Avoid:**

Heat, flames, ignition sources and incompatibles.

## 11. Toxicological Information

Oral rat LD50: 3400 mg/kg Investigated as a mutagen.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient Known Anticipated IARC Category

Choline Chloride (67-48-1) No No None

## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

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Not regulated.

## 15. Other Information

### **NFPA Ratings:**

Health: **1** Flammability: **1** Reactivity: **0**

### **Label Hazard Warning:**

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

### **Label Precautions:**

Avoid breathing dust.

Avoid contact with eyes, skin and clothing.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

### **Label First Aid:**

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. Get medical attention if irritation develops or persists.

### **Product Use:**

Laboratory Reagent.

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