

Material Safety Data Sheet
Choline chloride 60% corn cob

Section 1: Chemical Product and Company Identification

Product Name : Choline Chloride 60% corn cob
Chemical Formula : C₅H₁₄ClNO
Address : Tradeasia International PTE LTD
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Section 2: Composition and Information on Ingredients

Composition:

CAS #	Chemical Name	%	EINECS #
67-48-1	CHOLINE CHLORIDE	60%	200-655-4

Section 3: Hazards Identification

Potential Acute Health Effects:

Appearance : Clear liquid. Caution!. May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

Target Organs: No data found.

Potential Chronic Health Effects:

Eye : May cause eye irritation.

Skin : May cause skin irritation. Low hazard for usual industrial handling.

Ingestion : Ingestion of large amounts may cause gastrointestinal irritation. Expected to be a low ingestion hazard.

Inhalation : May cause respiratory tract irritation. Low hazard for usual industrial handling.

Chronic : No information found.

Section 4: First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician: Treat symptomatically and

Section 5: Fire and Explosion Data

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Auto ignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits, lower: Not available. 0

Explosion Limits, upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6: Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

EXPOSURE LIMITS

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
CHOLINE CHLORIDE	none listed	none listed	none listed

CHOLINE CHLORIDE: No OSHA Vacated PELs are listed for this chemical.

PERSONAL PROTECTIVE EQUIPMENT

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection

regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or

European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9: Physical and Chemical Properties

Physical State	: Solid
Color	: clear
Odor	: none reported
Vapor Pressure	: Negligible.
Vapor Density	: Not available.
Evaporation Rate	: Negligible.
Viscosity	: Not available.
Boiling Point	: Not available.
Decomposition Temperature:	Not available.
Solubility in water	: soluble in water.
Specific Gravity/Density	: Not available.
Molecular Formula	: C5H14ClNO
Molecular Weight	: 139.63

Section 10: Stability and Reactivity Data

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, dust generation, excess heat.

Incompatibilities with Other Materials: Oxidizing agents.

Hazardous Decomposition Products: Hydrogen chloride, nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11: Toxicological Information

RTECS#:

CAS# 67-48-1: KH2975000

LD50/LC50:

CAS# 67-48-1: Oral, mouse: LD50 = 3900 mg/kg; Oral, rat: LD50 = 3400 mg/kg.

Carcinogenicity:

CHOLINE CHLORIDE -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology:

No information available.

Teratogenicity:

No information available.

Reproductive Effects:

No information available.

Neurotoxicity:

No information available.

Mutagenicity:

No information available.

Other Studies:

See actual entry in RTECS for complete information.

Section 12: Ecological Information

Ecological Information:

N/P

Section 13: Disposal Considerations

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 261.3. 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.

Section 14: Transport Information

NOT REGULATED BY IMO.

US DOT

No information available

Canadian TDG

No information available. **Section 15: Other Regulatory Information**

Federal and State Regulations:

TSCA 8(b) inventory: Choline chloride

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R36/38- Irritating to eyes and skin.

HMIS (U.S.A.): Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

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

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

Hazardous Material Information System (HMIS)	Health	2
	Flammability	1
	Physical Hazard	0
	Personal Protection	E