

**PRODUCT TECHNICAL DOSSIER**

**CHOLINE CHLORIDE**

**Product Code:**

P03223

**Raw Material Full Name:**

Choline Chloride

**Raw Material Full Botanical/Chemical/Latin/Trade Name/Synonyms:**

2-hydroxy-N,N,N-trimethylethanaminium chloride

**Molecular Formula:**

C<sub>5</sub>H<sub>14</sub>ClNO

**Vegan / Vegetarian Status:**

Suitable for Both

**FEMAS status:**

Assured

**Limit/Range/Specification:**

Assay (anhydrous) 97.0% - 99.5%

**Particle Size:**

100 % through 20 mesh

**pH:**

10% solution 4.0 - 7.0

**Loss on Drying:**

Max 0.5%

**Residue on Ignition:**

Max 0.05%

**Country of Origin:**

China

**Country of Origin of the Manufacture:**

China

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**Origin of Product – Synthetic, Plant, Mineral, Animal, Fish or Fermented:**

Synthetic

**Compound Ingredients:**

0.8 - 1.2% Silicon Dioxide

**Shelf Life from Date of Manufacture:**

Minimum 1 Year

**Storage Conditions:**

This material is to be stored in a tightly sealed bag/container and to be kept in a cool place away from moisture and direct sunlight

**Appearance:**

Crystalline solid

**Colour:**

White/Off White

**Flavour/Taste:**

Characteristic

**Odour:**

Characteristic

**Microbiological Test**

**Total Viable Count:**

Max 1,000cfu/g

**Yeast & Moulds:**

Max 100cfu/g

**E.Coli:**

Not detected/g

**Salmonella:**

Not detected/25g



## Metals

### **Heavy Metals:**

Max 10 ppm

### **Lead (Pb):**

Max 3 ppm

### **Arsenic (As):**

Max 2 ppm

**Pharmacopeia Standard Used:** FCC

**There are no nuts in this recipe and are no nuts on site, however we cannot guarantee that the raw materials entering the site are nut free.**



ALLERGENS	Product Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Free from Peanuts and Peanut Derivatives (including possible cross contamination)	YES	NO	
Free from other Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoensis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)</i>	YES	NO	
Free from Sesame Seeds and Sesame Seed Derivatives	YES	NO	
Free from other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	YES	NO	
Free from Milk and Milk Derivatives (including lactose)	YES	NO	
Free from Egg and Egg Derivatives	YES	NO	
Free from Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten ( <i>wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barley grass</i> )	YES	NO	
Free from Soya and Soya Derivatives	YES	NO	
Free from Lupin and Lupin Derivatives	YES	NO	
Free from Mustard and Mustard Derivatives	YES	NO	
Free from Celery or Celery Derivatives (including Celeriac)	YES	NO	
Free from Fish and Fish Derivatives	YES	NO	
Free from Molluscs and their Derivatives	YES	NO	
Free from Crustaceans and their Derivatives	YES	NO	
Free from Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	YES	NO	



ADDITIVES / CONTAMINANTS / DIETARY REQUIREMENTS	Product Free From YES/NO	Listed Item on Site at Manufacturer YES/NO	If YES, Please Comment
Free from Additives	NO	YES	Silicon Dioxide
Free from Antioxidants	YES	NO	
Free from Ethylene Oxide	YES	NO	
Free from Gelatine	YES	NO	
Free from Flavourings (Artificial / Nature Identical / Natural / Smoked)	YES	NO	
Free from Maize / Corn and any Derivatives	YES	NO	
Free from Legumes / Pulses	YES	NO	
Free from Rice and Rice Derivatives	YES	NO	
Free from Added Salt	YES	NO	
Free from Added Sugar / artificial or natural sweeteners	YES	NO	
Free from Aspartame	YES	NO	
Free from BHA / BHT (E320 / E321)	YES	NO	
Free from Caffeine	YES	NO	
Free from Colours (Artificial / Nature Identical / Natural / Smoked)	YES	NO	
Free from Dextrose	YES	NO	
Free from Dioxins	YES	NO	
Free from MSG (Added and Naturally Occurring E621) or Glutamates (E620 to E625)	YES	NO	
Free from Nucleotides (E627, E630, E631, E635)	YES	NO	
Free from Polyols (sugar alcohols)	YES	NO	
Free from Benzoates (E210 / E219)	YES	NO	
Free from Sorbic Acid (E200, E203)	YES	NO	
Free from any other Preservatives	YES	NO	
Free from Ethanol	YES	NO	
Free from Honey	YES	NO	
Free from Lactose	YES	NO	
Free from Yeast and Yeast Derivatives	YES	NO	
Free from All Animal Products (Beef, Pork, Poultry or other) and Derivatives (which may include growth/yield hormones, antibiotics etc.)	YES	NO	
Free from Bovine Products or Derivatives (which may include growth/yield hormones, antibiotics etc.)	YES	NO	



### **CONFIRMATION OF BSE/TSE STATUS**

This is to certify that this product complies with all relevant current UK and EU Legislative requirements in regard to Transmissible Spongiform Encephalopathies (TSE) and Bovine Spongiform Encephalopathy (BSE) for human food, and so is free of TSE/BSE.

This is also to certify that, during the course of their manufacture, the above-mentioned product did not come into contact with any materials, which could be derived from TSE/BSE risk materials.

### **CONFIRMATION OF GM STATUS**

This is to certify that this product is not manufactured from GM raw materials and is therefore not subject to labelling under regulations 1829/2003/EC and 1830/2003/EC.

### **CONFIRMATION OF NON IRRADIATION STATUS**

This is to certify that this product, whole or in part, has not been subjected to Ionising Radiation as per European Directives 1999/3/EC.

### **CONFIRMATION OF NANDROLONE STATUS**

This is to certify that this product, whole or in part, has not come into contact with Nandrolone or any of its precursors in any way.

### **CONFIRMATION OF IOC PRODUCT STATUS**

This is to certify that this product, whole or in part, has not come into contact with any product/s, which is banned by the IOC (International Olympics Committee) and or WADA.

### **CONFIRMATION OF ANIMAL TESTING STATUS**

This is to certify that all the products sold by Cambridge Commodities have not been tested on animals in any part of its manufacture in accordance with regulation 86/609/EEC.

### **CONFIRMATION OF PESTICIDES STATUS**

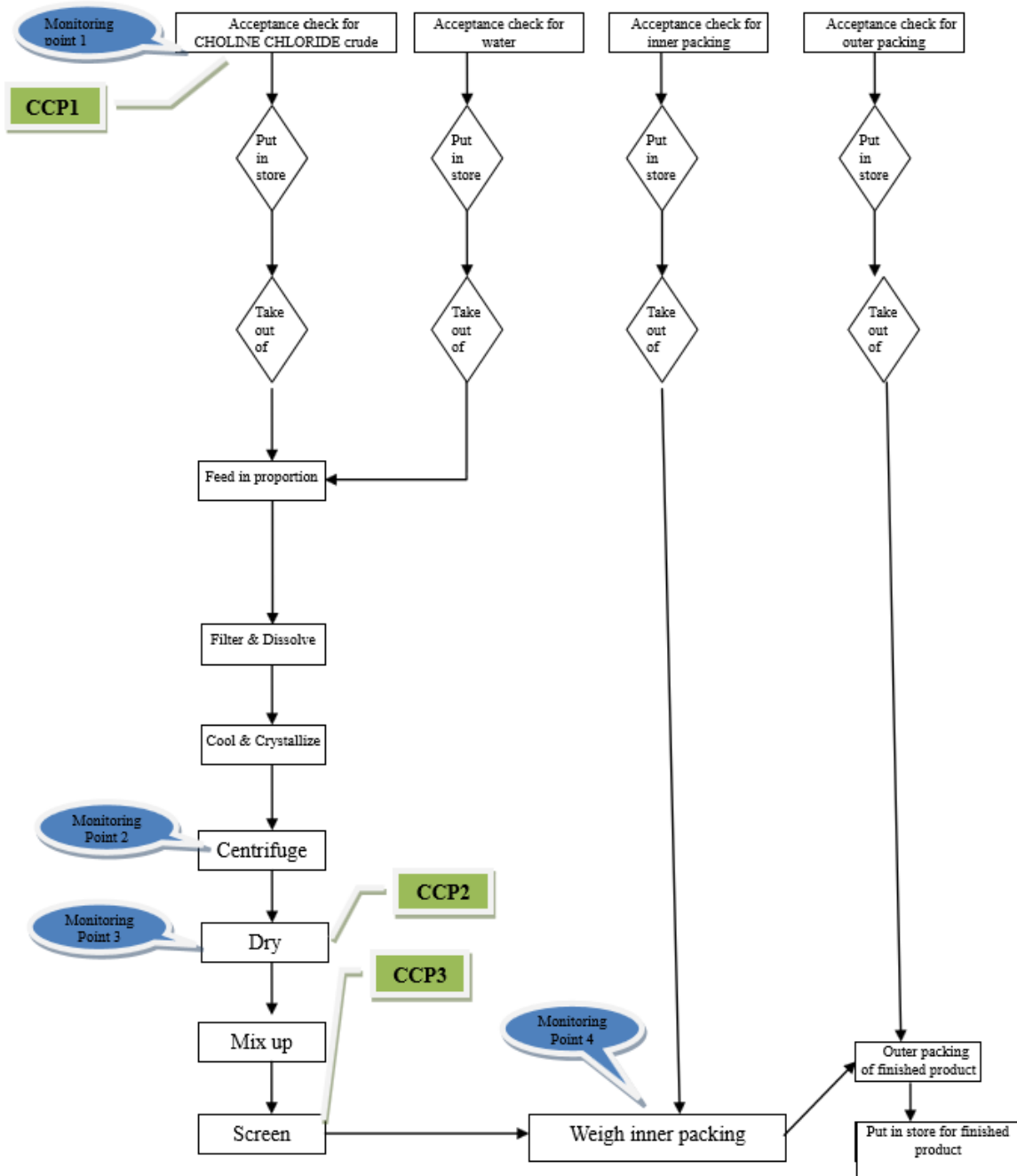
This is to certify that the above-mentioned product complies with the regulation (EC) No.396/2005 of 23rd February 2005 and commission Regulation (EU) No. 559/2011 of 7th June 2011 amending annexes II and III of the above Regulation.

### **CONFIRMATION OF NANOPARTICLE STATUS**

This is to certify that unless otherwise stated, the above-mentioned product is free of nanoparticles. Commission Recommendation 2011/696/EU, defines as follows: "'Nanomaterial' means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm".



**FLOW CHART FOR CHOLINE CHLORIDE**



## MATERIAL SAFETY DATA SHEET

### Section 1 Identification of the substance/preparation

**PRODUCT NAME:** Choline Chloride  
**PRODUCT CODE:** P03223

Company: Cambridge Commodities Limited  
 Lancaster Way, Ely, Cambridgeshire, CB6 3NX  
 Tel: 01353 667258. Email: qa@c-c-l.com

### Section 2 Possible Hazards

Precautionary Statements May be irritating to eyes, respiratory system and skin.  
 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

Pictogram:



### Section 3 Ingredients/Identity Information

<u>Components</u>	<u>% in Product</u>	<u>CAS Number</u>	<u>Formula</u>	<u>EINECS Number</u>
Choline Chloride	97.0 - 99.5%	67-48-1	C <sub>5</sub> H <sub>14</sub> ClNO	200-655-4
Silicon Dioxide	0.8 - 1.2 %	N/A	SiO <sub>2</sub>	N/A

### Section 4 Emergency and First Aid Procedures

If symptoms develop immediately move individual away from exposure and into fresh air. Rinse with plenty of water for at least 15 minutes while holding eyelids apart. Seek medical attention.

**Skin** Remove contaminated clothing. Wash with soap and copious amounts of water.

Seek medical attention immediately. Wash out mouth and drink water if conscious. Never give anything by mouth to an unconscious person.

**Inhalation** Remove to fresh air. If breathing is difficult, administer oxygen and seek medical help.



## Section 5 Fire and Hazard Data

May emit toxic fumes under fire conditions. Organic dusts can form explosive mixtures in the air.

Extinguishing Media                      Alcohol resistant foam, water spray, carbon dioxide, dry chemical powder.

Wear a self-contained breathing apparatus with a full-face piece operated in the positive pressure demand mode. Use personal protective equipment. Equipment should be thoroughly decontaminated after use.

## Section 6 Accidental release measures.

Precautions in case of leak or spill while transporting                      Stop engine, mark the road and warn other road users. Keep public away.

Environmental precautions                      Prevent from entering drainage system.

Cleaning up Methods                      old for waste disposal. Avoid raising dust. te after material pickup is complete.

## Section 7 Storage

Avoid creating dust. Avoid contact with eyes, skin and clothing, avoid prolonged or repeated exposure.

Storage                      Keep containers tightly closed in a cool and dry place for quality reasons. Protect from humidity and light. Hygroscopic.

## Section 8 Control Methods/Personal Protection

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below level of overexposure.

Avoid inhalation and wear respirator if needed. 3M Dust respirator No. 8710 or 9900 is recommended, or a NIOSH/MSHA jointly approved dust respirator.

Avoid contact and prolonged or repeated exposure. Wear resistant gloves. Wash thoroughly after handling. Protective clothing recommended.

Wear safety glasses in compliance with OSHA regulations if needed.

### Section 9 Physical and Chemical Properties

Physical state	Crystalline powder
Colour	White/Off White
Odour	Characteristic
Sieve Analysis	100% through 20 mesh

### Section 10 Stability and Reactivity

Chemical Stability	Stable under conditions mentioned in section 7.
Hazardous Polymerisation	Product will not undergo hazardous polymerisation.
Incompatibility	Strong oxidising agents, Strong acids and bases.
Hazardous Decomposition Products	No data available

### Section 11 Toxicological Information

Skin Contact	May cause skin irritation.
Skin Absorption	May be harmful if absorbed through skin.
Eye Contact	May cause eye irritation.
May be harmful if inhaled, material is irritation to mucous membranes and upper respiratory tract.	
May be harmful if swallowed in large amounts.	

### Section 12 Ecological Information

No Data Available	
Air pollution	Observe local/national regulations

### Section 13 Disposal Considerations

Waste from residues	Disposal shall be in accordance with local & national regulations. Can be disposed of with domestic refuse in accordance with the necessary technical regulations following consultation with waste disposal experts and the responsible authorities. Avoid disposing into drainage systems.
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### Section 14 Transport Information

Transport classification	Not classified as dangerous for any mode of UK or International transport
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## Section 15 Regulatory Information

European Regulation                      This product is not classified according to the EU regulations.

Health & Safety at work act 1974.  
COSHH Regulations (1994).  
EH40 Occupational exposure limits.

US Federal Regulations                  Not known.

## Section 16 Other Information

This advice is given by Cambridge Commodities Ltd who accepts no legal liability for it. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

Individuals working with chemicals should consider all chemicals to be potentially hazardous even if their individual hazards may be uncharacterised or unknown.

This Information provided in this document is subject to change and the batch specific Certificate of Analysis should always be referenced.


To be used as per local legislation.



### Change History

Version	Change	Customer Notification required Yes / No
1	First Issue	N/A
2	Updated to reflect suppliers changes to their specification.	N/A
3	Lead has been updated to meet "COMMISSION REGULATION (EC) No 1881/2006, M3 3.1.18" Max 3ppm. Version number also amended due to clerical error.	Yes
4	Changed shelf life from one year to minimum one year. Changed TVC from max 100cfu/g to max 1,000cfu/g and Yeast and Moulds from Max 30cfu/g to max 100cfu/g. Updated food intolerance information. These changes were made so that our specifications match those of the supplier.	Yes
5	Added vegetarian/vegan status after it was mistakenly removed.	No
6	Addition of FEMAS status 03.11.2017	No
7	Allergen table was split and has been amended 29/11/2017	No

### Document Approval

Originator Job Title	Assistant Quality Manager	Approver Job Title	Quality Specialist
<i>Richard Cecil</i>		 Shannon McKenna (Rev. 29, 2017)	












# P03223-Choline Chloride- Techncial Dossier 7

Adobe Sign Document History

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