

# Food Grade Calcium Chloride

**Tomorrow's solutions for today's problems**



Premier Chemicals

## Contents

Calcium Chloride - an introduction	2
Safety when working with Calcium Chloride	2
Food Grade Liquid and Solid Calcium Chloride	3
Oxidation Catalysts	4
About Us	4

## Calcium Chloride - an introduction

Premier Chemicals has developed a niche as Europe's leading supplier of Calcium Chloride products for a wide range of applications. Premier Chemicals strives to improve service through its knowledge of Calcium Chloride and flexible packaging and distribution options. Our dedicated team of knowledgeable staff are available to answer your technical and sales enquiries.

## Safety and Handling

**Here are the most important safety rules for handling Calcium Chloride.**

Calcium chloride is a strong salt. Protective clothing, rubber gloves and eye protection are recommended. Rubber safety boots should also be worn in work areas, since calcium chloride can damage leather. This product should be handled in areas with proper ventilation. Before using this product, refer to the MSDS for complete safety and handling guidelines. For proper disposal guidelines for calcium chloride wastes, consult the appropriate local regulatory authorities.

Calcium chloride is a hygroscopic product and should be stored indoors on pallets at normal temperatures. If stored according to recommendations, the maximum shelf life is two years.

# Food Grade - Liquid and Solid Calcium Chloride

Premier Chemicals have available a range of Calcium Chloride products to suit our customer's requirements.

## General Description

Food grade calcium chloride is produced under strict supervision to ensure high levels of purity and consistency. The product complies with EC 2000/63 and FCC standards. To ensure that the product meets our stringent demands, comprehensive analysis techniques are employed before the product is shipped. A Certificate of Analysis is provided with this product.

## 36% Food Grade Liquid Calcium Chloride

PHYSICAL PROPERTIES	
Appearance	Clear to slightly yellow
Odour	None
Crystallization	Temperature -7°C
Typical Density @ 20°C	1350 kg/m <sup>3</sup>

CHEMICAL PROPERTIES		
	Specification	Typical Value
CaCl <sub>2</sub> Concentration	35.5 %	36 %
pH (in 5% CaCl <sub>2</sub> solution @ 20°C)	7 - 9	7.9
Insoluble in water	< 0.05 %	< 0.01 %
Mg and Alkali Salts	< 1.0 %	0.15 %
Alkalinity as Ca(OH) <sub>2</sub>	< 0.10 %	< 0.01 %
F	< 14 mg/kg	< 14 mg/kg
Heavy metals (as Pb)	< 7 mg/kg	< 7 mg/kg
Fe	< 5 mg/kg	0.2 mg/kg
Pb	< 1.7 mg/kg	0.4 mg/kg
As	< 0.1 mg/kg	< 0.1 mg/kg
Hg	< 0.05 mg/kg	< 0.005 mg/kg

SPECIFICATIONS	
FAO Nutrition Meetings Reports No. 55 B	
Food Chemicals Codex (FCC), 5th edition, 2004	
EC 2000/63	

## 77% Food Grade Solid Calcium Chloride

SOLID FOOD GRADE CaCl <sub>2</sub> PACKAGING		
Package	Dimensions (LxWxH)	Units
25 kg Bag	1080x1070x1050	42/Pallet
1000 kg Big Bag	1000x1000x1350	1

PHYSICAL PROPERTIES	
Appearance	White flakes
Odour	None
Bulk Density	820 kg/m <sup>3</sup>

CHEMICAL PROPERTIES		
	Specification	Typical Value
CaCl <sub>2</sub> Concentration	> 77 %	78 %
pH (in 5% CaCl <sub>2</sub> solution @ 20°C)	9 - 11	10.9
Insoluble in water	< 0.20 %	0.03 %
Mg and Alkali Salts	< 4 %	2.3 %
Alkalinity as Ca(OH) <sub>2</sub>	< 0.3 %	0.2 %
F	< 40 mg/kg	18 mg/kg
Heavy metals (as Pb)	< 20 mg/kg	< 20 mg/kg
Pb	< 5 mg/kg	0.15 mg/kg
As	< 1 mg/kg	< 0.01 mg/kg
Hg	< 1 mg/kg	< 0.01 mg/kg

TYPICAL SIEVE ANALYSIS	
Sieve	Approximate % Passing
6.3 mm	100
4 mm	90
2 mm	40
1 mm	10

SPECIFICATIONS	
Food Chemicals Codex (FCC), 5th edition, 2004	
EC 2000/63	

## Applications

Premier Chemicals Ltd food grade calcium chloride is used in various applications within the food, beverage, potable water, and pharmaceutical industries. Some examples of common applications are listed below.

- In the production of beer and soft drinks, CaCl<sub>2</sub> is used as a source of calcium to regulate the hardness of water.
- In enzyme production, the calcium ion acts as a co-factor in some products.
- In the production of cheese, CaCl<sub>2</sub> is used as a source of calcium.
- CaCl<sub>2</sub> is also used to increase the firmness of canned fruits and pickled vegetables.
- In the remineralisation of desalinated water,
- CaCl<sub>2</sub> is also used as a source of both calcium and chloride.
- CaCl<sub>2</sub> is also used as a secondary cooling agent in various processes that operate according to food regulations.
- CaCl<sub>2</sub> is used as a calcium source in animal feed.

## Gas Purification

Premier Chemicals specialise in the supply of media for the treatment and purification of industrial and breathable gas. Through our wide range of global partners we constantly build our product knowledge to remain an innovative partner to our clients around the world. Through this customer focused flexible approach we have built an enviable reputation as a solution provider in this field.

## Carus® Products

Premier Chemicals are a distributor of Carus' products which are widely used for air purification in municipal and industrial applications. Carulite® catalysts are a series of environmental catalysts that are used in breathing air purification, exhaust gas treatment, and process gas purification.

### Carulite® catalyst applications include:

- The destruction of ozone emissions from various sources including water off-gas, corona treaters, printers and copiers.
- The destruction of deadly carbon monoxide in escape mask filters, in compressed breathing air purification, in life support systems in submarines and in cryogenic gas purification.
- The destruction of volatile organic compounds (VOC) emitted from printing and coating operations as well as the destruction of toxic ethylene oxide (EtO) gas used in sterilisation processes.

## Precious Metal Oxidation Catalysts

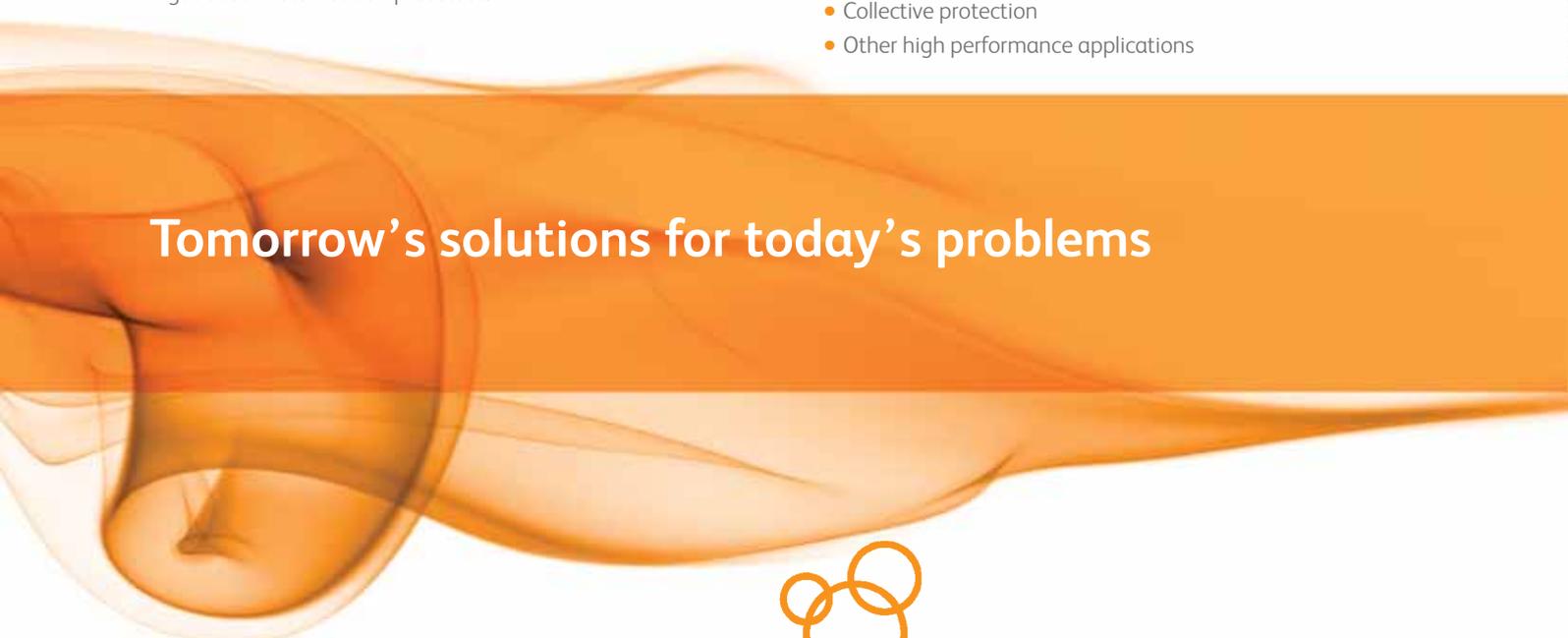
Premier Chemicals are a leading supplier of precious metal catalysts for a wide a range of applications and are the leader in the supply of Gold nano-particulate catalysts. Our unique knowledge and experience in both precious and transition metal catalysts and technologies underpins Premier Chemicals' development of leading edge products and services for the catalyst market worldwide.

**Gold Nano-Catalyst** - A highly active nano-particulate Gold catalyst optimized for the removal of Carbon Monoxide and other contaminants at ambient and low temperatures. Used in applications where high performance and moisture tolerance is required.

**Platinum Catalyst** - Highly active Platinum metal catalyst for removal of contaminants in gas streams that is available in granular and monolithic supports to suit the application.

### Precious Metal Catalyst applications

- Gas purification in submarines
- Production of UHP Gases
- Breathable gas purification in hyperbaric welding environments
- Mine refuge breathable air scrubbing
- Removal of Carbon Monoxide in sealed CO<sub>2</sub> lasers
- Face masks
- Collective protection
- Other high performance applications



## Tomorrow's solutions for today's problems

## About us

Based in the UK, Premier Chemicals are a customer focused business in our core business areas - Calcium Chloride supply and Gas Purification. We are committed to improving service standards to our clients through our knowledge of leading technologies, flexible packaging solutions and our customer focus.



## Premier Chemicals

For more information email us at [info@premchemltd.com](mailto:info@premchemltd.com) or [sales@premchemltd.com](mailto:sales@premchemltd.com) or visit our website [www.premchemltd.com](http://www.premchemltd.com)