

Food Grade Calcium Chloride

Calcium Chloride is a very versatile product. In addition to its many technical applications for roads, dust control and deicing, it also has applications in the food industry as either a direct additive to food or as part of an application used in the process of food manufacturing. The calcium chloride products that are used directly in food must be certified Food Grade, or pure.

Sicalco LTD. offers food industry calcium chloride in three forms: Briners Choice™, Anhydrous 94-97% pellets and Liquidow™ (Liquid). These products have certificates of analysis because they are batch made.

Respectively, the products are packaged as follows:

1. **Briners Choice™** (cacl₂ dry pellets, available in 50 lb. plastic bags and 2K pound super sacks.) For liquid applications, this product must be used in in solution form. Not food grade, but food safe and utilized in indirect food applications.
2. **Anhydrous food grade** (dry pellets, available in 50 lb. sacks) Because it is food grade, it can be used directly in food applications.
3. **Liquidow™32% food Grade** (liquid) Kosher certified and complies with Halal requirements. (available in rail cars or trucks) The product is already diluted, in solution and ready to be used.

Briners Choice™ will meet or exceed the current food chemical codex and is a food safe product. This is the product that is used in indirect food applications, but not directly in food. It comes in 50 lb. plastic bags and must be mixed with liquid.

Choose Briners Choice™ if you plan on mixing the product yourself. Briners Choice™ is used in pre-harvest and post-harvest applications to preserve fruits and vegetables, maintain firmness and prevent certain diseases. Frozen food applications may use Briners Choice™ as a secondary refrigerant due to its low freeze point or as an immersion freezing fluid. Since the product is benign, if a line breaks, the production run is not ruined. It can also be used as a deicer in and around freezers.(1)

Food Grade Anhydrous 94-97% Calcium Chloride Pellets are used in liquid form in post-harvest fruits and vegetables and are intended for use on direct applications to food to preserve freshness, maintain firmness and prevent certain diseases. Anhydrous 94-97% is also used in cheese making and beer brewing applications. Anhydrous 94-97% is manufactured according to the GDA's Good Manufacturing Practice. (2)

Liquidow™ Food Grade Calcium Chloride Solution comes to you in liquid form, already mixed. The solution is ready for application in a variety of food applications, including fruit and

vegetable canning and dairy foods processing. It can also be used in indirect food applications, such as a low-temperature heat-transfer fluid in the brewing and dairy industries. (3)

Calcium Chloride in Agriculture

Calcium chloride has been proven to enhance fruit and vegetable crops by adding to their firmness, their ripening time and prevent their susceptibility to many diseases. For instance, a study from the University of Wisconsin-Extension says that a calcium nitrate or a calcium chloride spray at 4 lbs. per acre will reduce bitter pit or cork spot in apples. While both products are equally effective, calcium chloride is the preferred spray due to cost.

In Michigan, a 4% dip or drench in calcium chloride will reduce or delay bitter pit in storage – 33lbs. per 100 gallons of water. Even peaches, which have a fast ripening time, can be delayed by 30% with calcium chloride.

In indirect food applications like a refrigeration setting, calcium chloride has a low freeze point and is harmless. If a line breaks, the production run is not contaminated. It also serves as a refrigeration bath for product firmness such as apples, deli meats and ice cream.

By working with the Sicalco team, you can be sure you are using the right product for any application.

References:

- 1) OxyChem Product Selection Guide, Briners Choice™
- 2) OxyChem Product Selection Guide, Food Grade Anhydrous 94-97% Pellets
- 3) OxyChem Product Selection Guide, Liquidow™ Food Grade Calcium Chloride Solution