

Description

LIQUIDOW Technical Grade Calcium Chloride Solution is a highly versatile liquid product that meets or exceeds ASTM D98 and AASHTO M144 purity requirements for Type L calcium chloride. This product is available in a range of concentrations (28% - 42%) to effectively meet specific application requirements.

This purified inorganic salt solution is produced by removing water from a naturally occurring brine solution. The National Organic Standards Board classified the brine process as “non-synthetic” since it does not involve reactions with chemicals such as hydrochloric acid or ammonia.

Application

LIQUIDOW is a highly versatile solution used primarily in deicing, dust control, and concrete acceleration applications. Other applications include tire weighting, brine refrigeration, wastewater treatment, and chemical processing.

When used as a prewetting agent for granular deicers, 32% concentration LIQUIDOW reduces overall application rates, which is good for the environment. It also increases melting speed and improves cold weather performance, which helps make roads safe faster.

LIQUIDOW—typically in concentrations of 35% or 38%—controls dust on gravel roads by attracting moisture from the air to keep the surface damp, even in hot, dry conditions. This moisture film binds fines and gravel together, resulting in a hard, low-dust surface. Not only does this help improve safety for road users and decrease local residents’ exposure to dust particles, it reduces maintenance costs associated with gravel replacement and blading requirements.

Calcium chloride has been used in concrete acceleration applications for more than 100 years. LIQUIDOW can reduce set time by as much as two-thirds, even in cold weather. It also improves workability and reduces bleeding, allowing earlier final finishing. Concrete acceleration with LIQUIDOW facilitates a quick and economical completion of jobs.

Storage and Shelf Life

Store in carbon steel tanks with an epoxy-based interior lining and epoxy-based exterior paint. Common stainless steels should not be used for the storage of liquid calcium chloride because they are subject to chloride stress cracking, even at temperatures as low as 100°F (38°C). Nonmetallic materials, such as fiberglass or plastic, may work well for smaller tanks at near ambient temperature. The puncture resistance and structural strength of these materials, relative to carbon steel, should be evaluated.

When properly stored to protect from moisture contact and maintained above crystallization temperature, the expected shelf life for liquid calcium chloride products is 36 months. Calcium chloride does not degrade or deteriorate; however, the shelf life is limited based on the potential for moisture intrusion into the product. Moisture intrusion will cause a decrease in overall calcium chloride concentration.

Typical Properties⁽¹⁾

(Common Concentrations)

Characteristic	Value				
Calcium chloride (%)	28	32	35	38	42
Potassium chloride (%)	0.75	0.86	0.94	1.02	1.12
Sodium chloride (%)	0.51	0.58	0.63	0.69	0.76
Density (lb/gal)	10.60	10.99	11.28	11.57	11.96
Freeze point (°F)	-46	-17	20	48	69

(1) These data are laboratory results typical of the product, and should not be confused with or regarded as specifications. All percentages are percent by weight.

For more information like safety data sheets (SDS), package options, calculation tools, etc., or to find an authorized distributor of OxyChem’s calcium chloride products, please call or visit our website.

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