

Product Evaluation

RE: Tiger 32 Premium Dust Control

PRODUCT

Tiger Calcium's Tiger 32 Premium Dust Control is a liquid calcium chloride formula. It is manufactured by and distributed in Alberta by Tiger Calcium located in Nisku, Alberta. Website: <https://www.tigercalcium.com/>

VENDOR CLAIMS AND INFORMATION

CLAIMS

Containing the industry leading standard of 32% active chlorides, Tiger 32 Premium Dust Control is a highly effective dust abatement and soil stabilization solution that also helps protect road bases from freezing and frost heaving. Dust from gravel roads can restrict visibility for drivers presenting a safety hazard, reducing air quality, and contaminating surrounding vegetation. This leads to increased road maintenance costs due to more frequent grading, the loss of aggregate material and frost heaving. Thanks to its hygroscopic properties Tiger 32 reduces dust and stabilizes soil by keeping the surface damp longer, binding the fine particles of dust together and contributing to better compaction of the road material. Roads treated with Tiger 32 are more stable and have a decreased rate of deterioration resulting in a reduction in the costs associated with maintenance and the reapplication of aggregate.

DESCRIPTION

Tiger Calcium's proprietary process produces a true 32% active chloride solution by removing most of the sodium chloride, potassium chloride, iron and other contaminants that can be harmful to the environment. Active chlorides are important in dust control and base stabilization products as they are the component that reacts to inhibit evaporation, increase roadbed moisture, and keep fine particles compact. Other chlorides (sodium, potassium) are unable to independently extract moisture from the environment, as they require such a significantly high level of humidity to attract moisture that road dust would not be an issue under such conditions. Brines containing high concentrations of sodium and/or potassium chloride are not used for effective dust control because once water evaporates the sodium chloride remains in a solid state, adding to the dust rather than reducing it. Typical Composition: Calcium (Ca²⁺) >11.0%, Magnesium (Mg²⁺) >1.0%, Potassium Chloride (KCl) >1.0%, Sodium (Na⁺) >0.5%, Potassium >0.6%, Calcium Chloride (CaCl₂) >29.0%, Sodium Chloride (NaCl) >1.0%, Magnesium Chloride (MgCl₂) >3.5%

POTENTIAL USAGE

Tiger 32 can be used for dust control and base stabilization.

STANDARDS

Biomonitoring Report for Tiger Calcium, Analytical Labs, Boise ID, Aug 2018

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE

Alberta Transportation has some experience with the use of Liquid Calcium Chloride (brine)

APPLICABLE STANDARDS

Specification 52.6 Calcium Chloride Treated Sand
Specification 53.31 Supply and Apply Dust Abatement

RECOMMENDATIONS

Tiger 32 Dust Control be listed as a Proven Product under Alberta Transportation Products List, Dust Abatement – Proprietary, based on the information provided and the field performance.

RESTRICTIONS ON USE

Caveat: Not to be used over the bridge decks.

TRIAL PROJECTS

Since 2018, Tiger 32 Premium Dust Control has been used on different highways in CMA 25, Southern Region, by Maintenance Contractor Volker Stevin at the application rate of 2 litres per square meters.

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