

Product Evaluation

RE: Review of Formula 35 Plus

PRODUCT INFORMATION

Product Name: Formula 35 Plus
Website: https://www.tigercalcium.com/

Manufacturer: Tiger Calcium Inc, Calgary
Supplier: Tiger Calcium Inc, Calgary

VENDOR CLAIMS AND INFORMATION

CLAIMS

Containing the industry leading standard of 35% active chlorides, Formula 35 Plus is a highly effective organic based corrosion inhibited CaCl₂ formula for optimal dust control and road stabilization. Its soil stabilization properties also help 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 Formula 35 Plus 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 Formula 35 Plus 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 Formula 35 Plus, proprietary process produces active chloride solution by removing most of the NaCl, KCl, iron and other contaminants that can be harmful to the environment. Active chlorides react to inhibit evaporation, increase roadbed moisture, and keep fine particles compact. Other chlorides (NaCl, KCl) 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 NaCl, KCl aren't used for effective dust control because once water evaporates, they remain in a solid state, adding to the dust rather than reducing it. Typical Composition: Active Chloride (Ca+Mg Chlorides) 34% ± 1.0, CaCl₂ 29% ± 1.0, MgCl₂ 4.0% ± 1.0, NaCl <2%, KCl <2%.

POTENTIAL USAGE

Formula 35 Plus can be used for dust control and base stabilization.

STANDARDS / TESTS

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

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE

Transportation and Economic Corridors has applied Liquid Calcium Chloride (brine) on some Highways.

APPLICABLE STANDARDS

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

RECOMMENDATIONS

Formula 35 Plus be listed as a Potential Product under Transportation and Economic Corridors Products List, Dust Abatement – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

RESTRICTIONS ON USE

Caveat: Not to be used near the bridge decks.

TRIAL PROJECTS

Rishi Adhikari

cc New Products Evaluation Group – Kristen Tappenden,
Bradley Maguire / Dominique Grell