



TECHNICAL INFORMATION

Speaking directly with Municipalities, Da-Lee understands the importance of technical information and how it impacts the final decision of dust control solutions.

For this reason, we have collected a comprehensive volume of technical information, from product comparisons to MSDS data, to tips on getting the most from every application of 35% LIQUIDOW™.

To view technical data pertaining to 35% LIQUIDOW™ Calcium Chloride, please visit our website:

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Stabilization with Calcium Chloride provides better roads top to bottom

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STABILIZATION WITH CALCIUM CHLORIDE

When used with a suitable aggregate material, calcium chloride serves these 5 main purposes:

1. *Reduces dust.*
2. *Conserves road material.*
3. *Aids in producing a dense surface.*
4. *Aids in maintaining a tight, compact shoulder at pavement edge.*
5. *Retards and reduces frost boil action.*

BENEFITS OF CALCIUM CHLORIDE STABILIZATION AS OPPOSED TO SURFACE TREATMENT

- ▶ *Hard, weather sealed, smooth riding surface free of hazardous dust. A higher level of service than gravel.*
- ▶ *Provides a surface that can if necessary be reworked and shaped using existing equipment and materials. i.e.) a grader.*
- ▶ *Eliminates the need for patching or spray patching equipment and materials.*
- ▶ *Low annual average costs due to minimal gravel replacement costs, minimal grading expenses (once or twice a year) and reduced washout repair costs.*
- ▶ *Public approval.*

Stabilizing with Calcium Chloride will result in lower annual average costs and levels of service provided will be similar to surface treatment.

Perhaps the key feature to calcium chloride stabilization is surface compaction with a roller or wobble wheel in order to remove float after application of the calcium chloride will be required in order to provide the hard, weather sealed, smooth riding surfaces demanded.

In the first year, it is suggested that calcium chloride be applied at the rate of 1% by weight to the total weight of the granular mass to be stabilized. For the purposes of stabilization it will be necessary to think in 3 dimensions: Length, width and depth of stabilized surface.

For instance, a 24 foot road width, 1 mile long stabilized to a depth of 4 inches, will contain roughly 2000 tons of gravel (uncompacted); with a weight of calcium chloride being 1% of the gravel mass, a total of 20 flake equivalent tons would be required for stabilization. i.e.) 20 tons/mile calcium chloride.



Each subsequent year this application can be reduced due to the residual calcium chloride build up in the road base.

The result is a low maintenance road with a level of service similar to surface treatment without the high cost of surface treating.

Roads that need a major rebuilding and are carrying high traffic volumes, possibly on a temporary basis are ideal candidates for stabilization with calcium chloride.

STABILIZING GRANULAR BASE COURSES

Gravel stabilization is the uniform blending, shaping and compaction of properly selected aggregates with calcium chloride so as to achieve maximum compaction and structural base strength. One percent by weight of gravel is the optimum amount of calcium chloride to use. Stabilization can improve the structural strength of a road up to thirty percent when compared to standard unstabilized gravel.

RECOMMENDED PROCEDURE

1. *Scarify and mix the existing granular surface.*
2. *Add new aggregate lift as required.*
3. *Add calcium chloride at the rate of 1% by weight of gravel.*
4. *Uniformly mix all materials.*
5. *Provide proper finished cross-section for drainage to new surface wearing course.*
6. *Apply uniform surface compaction.*

BENEFITS

- ▶ *Reduction of maintenance gravel in areas where aggregates are costly.*
- ▶ *Maximizes gravel wearing course service levels on heavier traveled gravel roads.*
- ▶ *Greatly reduces frost heave in most roads.*

USES

- ▶ *Stabilizes base for surface treatments and hot-mix asphalt surfaces.*
- ▶ *Excellent additive for recycled asphalt bases.*
- ▶ *Cost effective alternative to hard top wearing courses.*
- ▶ *Protection from winter frost penetration.*

