

DustGard®

L I Q U I D

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More Than Dust Control

When choosing products for dust control, soil stabilization or wind erosion problems, many road maintenance supervisors prefer magnesium chloride. When applied to roads and bare soil areas, it immediately provides tangible benefits that include:

1. Cleaner air, which leads to better health, better visibility and much cleaner vehicles, property, vegetation, and living sites;
2. Inexpensive, smooth, firm driving surface, which increases vehicle productivity, decreases fuel consumption, and saves time;
3. Greater safety, increased driver visibility and decreased risks caused by loose gravel, soft spots, road roughness and flying rocks;

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One week later, after DustGard®



4. Stable soil, preventing destructive wind erosion; and
5. Money-saving opportunities in areas ranging from vehicle and road maintenance expenditures (such as blading, watering, and gravel replacement) to improved engineering properties of soil.

Magnesium chloride has proven that it can greatly eliminate or reduce the costs of blading unpaved roads. Its hygroscopic properties (it attracts moisture from the air and keeps the ground moist) control dust and stabilize aggregate and dirt surfaces on virtually any type of road. By keeping the fines in the road from drying out, it keeps the larger aggregate from being bounced into the ditch by vehicle traffic.

Where should you use magnesium chloride? It can be used on mine and timber haul roads, as well as county, military, agricultural, industrial and federal project roads. Private and rural roads, parking lots, industrial and construction areas, and arenas all benefit greatly from application. Its low toxicity and environmentally friendly profile make it ideal for sensitive areas.

Highly effective under most road conditions, in low relative humidity as well as high, magnesium chloride improves road surface and base, with soils and aggregates normally used in road surfacing.

For more information, go to DustGard.com to see how using DustGard® magnesium chloride in your dust control program can benefit your budget and your residents.

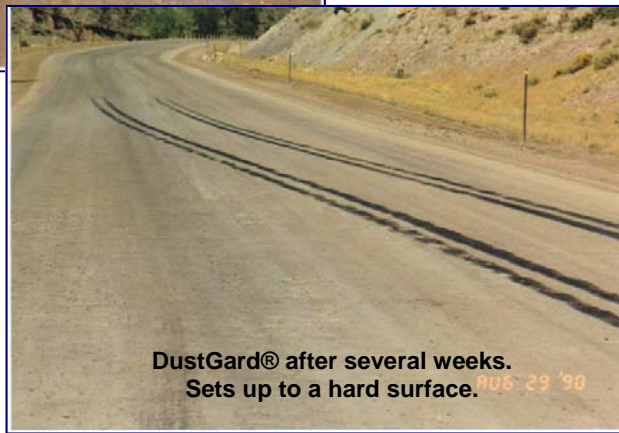
Keys to Success: Appropriate Materials & Good Road Preparation

As with any project, the right ingredients most likely ensure the desired result, and dust control and road stabilization are no exceptions.

Start with the right type of gravel: Many dust control agents are not adhesives – they mainly draw moisture from the air to keep the gravel damp. So, make sure you use gravel that has a good gradation – particularly a reasonable percentage of fine materials with some plasticity. This will help the gravel compact and bind itself together into a strong, durable base. Most dust control products keep the surface moist so that it will not give up its fines in the form of dust and keep the material on the road. If you do not have good gravel on your roads, bring in new material before you treat it, or your dust control will be short lived.



Photos courtesy of Dustbusters, Inc.



DustGard® after several weeks.
Sets up to a hard surface. 106 29 '90

Road surface preparation: Make sure that ruts, washboards, potholes, drainage problems, gravel segregation, and hard, impervious areas have been rectified. Blading will take care of those types of problems and provide a smooth, well-drained surface. But if the surface is already permeable, smooth, firm, and shaped for drainage (crowned), it's ready for application without blading.

Pre-watering: Before application, the road should be watered – ideally to a depth of 3 to 4 inches – to break the surface tension and allow maximum penetration. This is especially important if wind erosion is a problem. If the surface is too tight for easy water penetration, blade for a better surface. For best results, the surface should still be damp at time of application to extend the life of the treatment.

Treating shoulders of paved roads. Use the same techniques for shoulders to create a firm, stable shoulder similar to the adjacent paved road surface.

After application: Create a durable, smooth surface by compacting the road with either a vibratory or pneumatic roller. Be careful not to pick up the larger

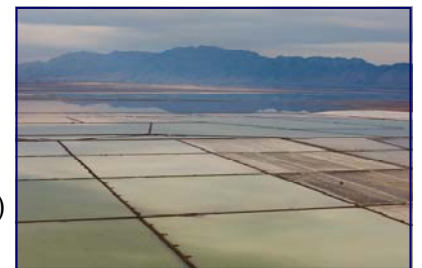
aggregate. The key to a strong, dust-free surface is the optimum distribution of different sized particles – that allows the fine particles to be bound by the magnesium chloride into a firm surface.

All Natural: Comes From the Great Salt Lake

Naturally renewable resource. A naturally occurring mineral in the Great Salt Lake, DustGard provides an economical solution to help maintain gravel roads. It is an easy-to spread, liquid magnesium chloride product, ideal for deep soil penetration and maximum control of dust.

Produced with solar energy, DustGard production has virtually no carbon footprint.

Less toxic than baking soda, DustGard magnesium chloride is a natural solution for gravel road maintenance and soil erosion programs. It reduces foreign sediment in nearby surface waters (dust that settles in creeks and streams) as well as helps prevent stunted crop growth caused by clogged pores in plants.



Proper Application: DustGard® Magnesium Chloride

DustGard performs best when applied to a smooth, properly prepared soil or gravel surface. It can be applied with equipment ranging from a converted asphalt distributor with fully automatic controls to a water truck with a spreader bar. The equipment should be capable of laying down an even application across the full width being sprayed. A pressurized spreader bar with adjustable rates and width is recommended for even and accurate application.

Weather and traffic: Don't apply dust control during or right before a rain storm. It needs time to fully penetrate to minimize rain leaching or runoff. While temperature is not critical, it works best when ground temperatures are above 50° F. Traffic has little effect on the treatment, but should be held off, if possible, until the DustGard has penetrated. If traffic cannot be restricted, it should be slowed to around 10 MPH to minimize splashing and coating of vehicles.

However, DustGard is water soluble and will easily rinse off vehicles.

Application rates: The basic recommended rate for a first time application is 1/2 gallon per square yard, applied in two 1/4 gallon per square yard applications, with the second being made as soon as the first has penetrated. This will ensure deep, even penetration and minimize runoff. Lower application rates are possible, but a shorter performance life can be expected. This basic rate usually provides dust control and soil stabilization for at least 3 to 6 months before reapplication is necessary, depending on the traffic rates. Reapplication in late summer can be made if needed to extend the life of the application. Residual DustGard in the surface often allows a lower reapplication rate. A regular, annual program will prevent aggregate loss and provide months of dust-free driving.

Application Specialists: North American Salt Company partners with distributors who have many years of experience applying DustGard magnesium chloride for dust control. They can answer any specific questions or apply DustGard for you, if needed. Go to www.DustGard.com for the service provider in your area.



Photo courtesy of Scotwood Industries.

Fugitive Dust: What you don't know can impact your health

Dust is common in most areas of the world. Periods of severe and widespread drought intensify air quality and visibility problems and may adversely affect people's health, particularly those who already have breathing-related problems.



Particle size impacts effects. Dust particles vary in size from coarse to very fine. Coarse particles do not pose a serious health threat to the general public, as they generally only reach as far as the inside of the nose,

mouth or throat. However, some people with pre-existing breathing-related problems, such as asthma and emphysema, may have more significant complications. Smaller or fine particles can reach much deeper into the sensitive regions of the respiratory system and have a greater potential to cause serious harm to your health.

Those most at risk: People who may be more vulnerable than others are infants, children and adolescents, as well as the elderly, people with respiratory conditions, such as COPD or bronchitis and people with heart disease. Those with concerns may wish to request dust control on their road from their city, county or home owners association.



Produced by

North American Salt Company
9900 W. 109th Street, Suite 600
Overland Park, KS 66210

800-693-3334

For a distributor in your area, go to
www.DustGard.com



"DustGard saves me money."



People are talking about DustGard and what it has done for their operation. Assistant Road Supervisor Verlin Van Zee of Lakes Highway District, Idaho says he sees a lot of benefits with DustGard.

"DustGard has reduced road grading from two or three times per month to one or two times per year. We've reduced our road equipment, allowing our manpower to do other maintenance needs. **In the nine years since we started the road treatment program, we have not re-graveled any of our gravel roads,** and after three years of using the product, we have been able to cut our treatments in half.

"But our biggest benefit is public safety and customer satisfaction. Since we've been treating our roads, we have reduced our complaints from the public by 90 percent!"

For more information about how DustGard can work for you, go to www.DustGard.com.