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Unpaved Road Stabilizer

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UNPAVED ROAD STABILIZER

THE NEED

Many roads cannot be paved due to geological, environmental or economical reasons. However, unpaved roads may cause environmental concern from residents and users of the roadway. The fugitive dust that generates from an unpaved roadway presents respiratory health concerns as well as having an affect on the agricultural environment around the roads. Unpaved roads can also cause safety problems due to the irregular riding surface drivers contend with. Natural Solutions Corporation's Roadbind products can reduce unpaved road maintenance costs by up to 95%, and help provide for a safer and healthier environment by eliminating hazardous fugitive dust and unsafe driving conditions.



FIGURE 1 UNPAVED ROAD STABILIZER

THE TECHNOLOGY

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One of the primary ingredients in Roadbind products is lignin, a natural binder found in plants that provides strength and rigidity to the cell wall thus enabling trees to grow in an upright fashion. About one-quarter of dry wood is lignin, making it the second most prominent component of the wood part of a tree, with cellulose being the principal component. In the pulp mill process, cellulose is separated from the lignin and recovered for use in a variety of different products. Using lignin as one of the primary ingredients, Natural Solutions Corporation has blended it with other environmentally safe proprietary agricultural ingredients. These blended products are known as RB Ultra™ and RB Ultra Plus™. When properly mixed and applied, Roadbind products are more resilient, durable, long lasting, and will increase load bearing ratios two to three times. While Roadbind products are water-soluble and are rinsed from equipment and clothing easily, it takes heavy and prolonged rains and traffic to effect the treated surfaces. RB Products are naturally adhesive when moist. When applied to dirt roads, the RB Products solutions coats individual road particles with an adhesive-like film that binds the particles to adhere closer together for a stronger road surface. Consequently, water uptake by the roadbed surface is greatly reduced and the binder is less likely to be washed away by rain.

THE BENEFITS

The benefits from applying this products are:

- Cost effective solution for maximum Dust Control and Road Stabilization
- Reduces road maintenance Cost (blading/grading, watering and gravel replacement)
- Ease of application
- Prevents costly destructive wind erosion
- Environmentally safe, non-toxic, and biodegradable
- Effective with most road materials
- Provides an inexpensive, smooth, firm driving surface
- Increases load bearing capacity
- Creates a denser, firmer road cap at less cost than traditional treatments
- Dust suppressant (may eliminate up to 100% of dust on treated roads)

STATUS

Natural Solutions Corporation began operations in January of 1997 and currently produces and markets its environmentally friendly unpaved road stabilizers and dust suppressant through out the U.S. and South America.

BARRIERS

- Limited information on life-cycle



- Possibility that re-application may be needed after heavy rain.
- Evaluation on the weather condition of the area where it is to be applied is needed

POINTS OF CONTACT

Natural Solutions Corporation,

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REFERENCES

1. News Release, 2000 Nova Award Nominations
2. Roadbind America, Inc.

REVIEWERS

Peer reviewed as an emerging construction technology

DISCLAIMER

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PUBLISHER

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