



TRANS/SEAL I

A Dust Palliative/Soil Stabilizer

Trans Seal I was developed and tested in 1999. The initial concept was to use Trans Seal I as a coal topper when transporting coal by unit trains from the mine to the utility customers. Consideration was given to the blowback of coal dust while in transit as well as the off-loading of the coal dust through the bottom gates of the rail cars during discharge. Prior to the use of Trans Seal I, a sample of this product was sent to the customer for extensive testing to determine whether or not the application of Trans Seal I had any adverse effects on the performance of the coal. All test proved positive, **(with the application of Trans/Seal I actually increasing the BTU content of the treated coal)** with no adverse effects to the customer, their equipment, or the environment.



Treated Coal Cars



Untreated Coal Cars

Trans Seal I is a dust suppressant or (Topper) as referred to in the mining business, designed to control the blowback of coal dust, during its transportation by unit train from the mine to power generation customer. When offloading coal at its destination, the process will differ depending upon the design of each power plant. Some facilities allow coal to be dropped through the bottom gates of each coal car, over a trestle as pictured below, creating large dust clouds from above and below each rail car. Trans Seal I can be used to treat the surface of the coal or as a body treatment when loading the coal cars.

In 2000, the Clark County Health District adopted new Air Pollution Control Regulations for Clark County Nevada (the greater Las Vegas area). Due to the large increase in population and on going construction, air quality had become a major problem. The soil in Clark County was classified into five categories, (high, moderately high, moderately low, low and slight), for potential fugitive dust that could be entrained in the ambient air as the result of human and/or natural activities.

Since then, Trans Seal I has been used as a Dust Palliative/Soil Stabilizer on numerous construction projects in both Clark County and Lyons County, Nevada. During the years 2002 and 2003, our Trans Seal I product was used while constructing an 80-mile pipeline, located in Southern California.



Lab test have also been conducted on Trans Seal I using USEPA procedures for the evaluation of acute toxicity, (methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms, EPA/600/4-90/027 F, USEPA EMSL, Cincinnati, August 1993). These tests were performed using Trans/Seal I as received. No pre-test dilution was performed. Trans Seal I proved **non-toxic** upon application.

In February 2003, Trans Seal I was reviewed and accepted for application on the Phoenix Sky Harbor Airport grounds. The acceptance of our Trans Seal I product required a California Bearing Ratio (CBR) Test which requires the testing of an untreated A-7 soil and a treated A-7 soil material. The A-7 material was defined by a Sieve Analysis and Plasticity Index Test.

Dust Control Uses

Trans/Seal I is **proven effective** in controlling and suppressing dust in a variety of applications such as gravel trailer yards, dozed construction sites, residential sites, vacant lots, roads, aggregate stockpiles, and solar power stations. Trans Seal I is non-toxic to the environment and is a **GREEN** alternative to, Magnesium Chloride and other salt suppressants. Trans Seal I durability **requires fewer applications** than the competition and is thus **more cost effective**. A small example of some of the applications are:

- Roadways
- Pathways
- Parking Lots
- Unpaved Roads
- Construction Sites
- Vacant Lots
- Trails
- Mining and Commercial Stock Piles
- Solar Generating Stations
- Coal Cars
- Erosion Control
- Housing Developments

Trans Seal I Dilution Ratios

Typical Dilution Factors and Solution Application Rates for a 5/8” to 1” Crust

Product	Soil Application	Dilution (Product to Water)	Trans Seal I Required (gal/acre)	Application Rate (gal/yd ²)	Water Required (gal/acre)	Penetrometer Test (tons/ft ²)	Drop Ball Test (Pass/Fail)	Thickness of Crust (in)
Trans Seal I	Heavy	1 to 40	65	0.54	2,600	1.50	Pass	5/8 - 1
Trans Seal I	Heavy	1 to 60	43	0.54	2,600	1.00	Pass	5/8 - 1
Trans Seal I	Moderate	1 to 80	32	0.54	2,600	0.75	Pass	5/8 - 1
Trans Seal I	Light	1 to 100	26	0.54	2,600	0.75	Pass	5/8 - 1
Trans Seal I	Light	1 to 150	17	0.54	2,600	0.50	Pass	5/8 - 1

Typical Dilution Factors and Solution Application Rates for a 1/4” to 3/8” Crust

Product	Soil Application	Dilution (Product to Water)	Trans Seal I Required (gal/acre)	Application Rate (gal/yd ²)	Water Required (gal/acre)	Penetrometer Test (tons/ft ²)	Drop Ball Test (Pass/Fail)	Thickness of Crust (in)
Trans Seal I	Light	1 to 60	24	0.30	1,500	0.75	Pass	1/4 - 3/8
Trans Seal I	Light	1 to 80	18	0.30	1,500	0.50	Pass	1/4 - 3/8

Example:

Formula for Coverage: Length of lot (ft) x width of lot (ft) x 0.06 (gal/ft²) = Gallons of mixed solution to be applied

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NOTE: This product must be thoroughly mixed with the allocated water amount before use.