For further info please call 626-791-7954 Los Angeles.
Ask for Katerina, Alejandra or Simon.

TSW™

ECO FRIENDLY

TOP-SEAL WHITE™

Made in USA

Liquid Soil Sealant and Stabilizer

TOP-SEAL WHITE

ROADWAYS – PARKING LOTS – AIRFIELDS – EMBANKMENTS - SHOULDERS

Soil Stabilization ◆ Dust Control ◆ Erosion Control

TOP-SEAL WHITE ™ (TSW) is an environmentally safe, all purpose liquid soil additive that is mixed with water and used for controlling and managing a variety of soil conditions in many countries throughout the world. When properly applied in sufficient quantities, TSW will effectively prevent **base failure**, **dust pollution**, **soil erosion**, and **loss of water** from ponds and reservoirs.

BASE STABILIZATION. Department of Transportation field-testing revealed that TSW's strength capabilities are comparable to cement stabilization. Other tests have shown that U.S. environmental standards are significantly exceeded in TSW's resistance to moisture. TSW is easily accommodated into routine construction procedures with no requirement for special equipment or handling precautions. The product is simply diluted with water and distributed into the soil in sufficient quantities to bind and transform the base into a solid mass of tightly cemented soil particles. **At a fraction of the cost of cement or lime stabilization, TSW is the most cost effective solution for road base stabilization.**

SEE THE TSW DIFFERENCE! ***Left photo***: a close-up view of a road base with heavy traffic prior to treatment with TSW. R***ight photo***: the same segment is shown six weeks after treatment with the product. Even after exposure to the extremes of heavily loaded haul trucks, military tracked vehicles, and severe weather conditions, there are no visible signs of damage or deterioration in roads treated with TSW. **When properly applied in sufficient quantities, TSW will dramatically increase soil strength and will significantly reduce permeability.**

STABILIZATION OF UNPAVED ROADS & CONTROLLING DUST POLLUTION. Many unpaved roads throughout the world have been improved with TSW. The product is simply added to water and distributed into a road base during normal construction or reconstruction procedures. A final overcoat is applied as a finishing touch, and with occasional maintenance applications, the road will remain permanently stabilized and free from dust pollution. In the end, there is a tremendous savings by eliminating the need for asphalt or other types of wearing surfaces, and by the reduction of maintenance repairs or reconstruction efforts. For haul roads and heavy traffic, please refer to Eco Estates International's publication, **HR-TS ™** .

DUST POLLUTION is a TERRIBLE PROBLEM! City managers and government agencies throughout the world are faced with never ending battles of trying to protect their citizens from the effects of dust pollution. Strict environmental protection laws do not allow for this problem to be ignored, and this has forced many municipalities to rely on a wasteful and time-consuming program of daily watering operations. Fighting dust pollution with constant watering is an outdated method of dealing with a problem that can be much more easily and less expensively solved with an initial application of TSW, and occasional reapplications as needed. Please contact Eco Estates International for more information.

Other Uses for Top-Seal White ™

RECYCLING OLD ASPHALT ROADS . . . is one of the best uses for Top-Seal. The product is environmentally safe, and therefore, it is an excellent alternative to the increasingly unfavorable method of depositing more asphalt emulsions into the soil. The Texas Department of Transportation has used Top-Seal as the **primary additive for cold in-place cycling** of old asphalt roads. The results of pulverizing asphalt and mixing it with its old base are dramatically enhanced by the introduction of Top-Seal as a superior stabilizer that will tightly bind it all together. There are significant advantages in using Top-Seal in the renovation of old asphalt roads:

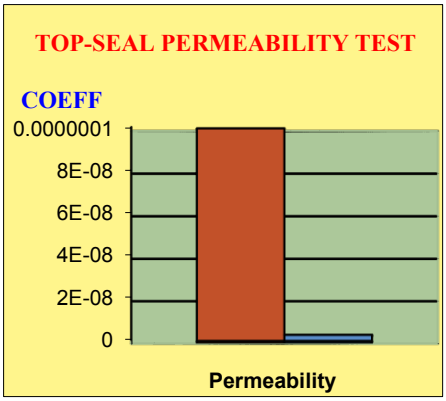
◆ ***Less expensive*** ◆ ***More effective*** ◆ ***Easier to apply*** ◆ ***Superior binding capacity***
◆ ***No special handling procedures*** ◆ ***No special equipment or heating tanks***

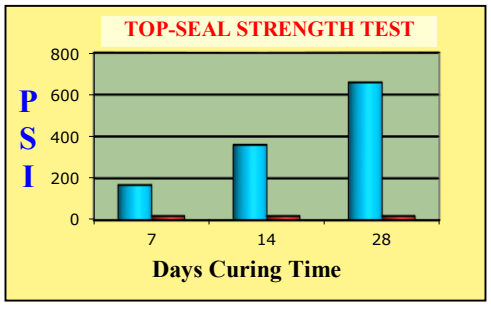
Made in USA

The most important benefit from using Top-Seal with old asphalt is that the process of **excavating and disposing of the old asphalt in accordance with very strict environmental laws can be completely eliminated**. Overall, a tremendous savings and superior performance can be expected from using Top-Seal in the recycling of old asphalt roads.

STABILIZATION with CEMENT and TSW. The amount of cement in a soil base can be reduced by as much as 50 percent when supplemented and stabilized with TSW, and the resulting performance can be equal to or greater than the cement alone. Most importantly, a savings of as much as 30 percent can be achieved in the process. The plasticity characteristics of TSW will help create a more flexible base with the cement, thereby, reducing the threshold for fracturing and resulting in a significant reduction in the cost of maintenance. Texas Department of Transportation laboratory testing has revealed that the strength characteristics of TSW are comparable to cement in similar soils. (See Summary of Laboratory Testing Results.)

STABILIZATION of LANDFILL LINERS and SOIL EROSION CONTROL. TSW has a tremendous capacity for making soil virtually impermeable. The chart on the left shows a comparison between the US EPA permeability coefficient of $1x10^{-7}$ for land fills and the laboratory confirmed permeability coefficient for TSW of $2.9x10^{-9}$. TSW meets and exceeds the US EPA standard many times over, thereby establishing itself as a superior additive for landfill composite liners. When used in landfills and for soil erosion control, TSW is transformed into a solid membrane that will seal itself against liquid or moisture penetration. Substandard soils, that would otherwise be excavated and replaced, can be treated with TSW at a tremendous savings in landfills, embankments, and reservoirs. (Source: Holt Engineering, Austin, Texas, USA.)





● = Untreated ● = TSW

LABORATORY TESTING with TSW demonstrates the product's superior capacity for tremendous improvement in soil strength and for significant reduction of permeability. The graph on the left shows a strength increase of approximately 1,180 percent while the graph shown above reveals a reduction in permeability that exceeds U.S. Environmental Protection Agency standards by many times. Laboratory testing with TSW requires special modifications. Please contact EEI for more information. (Testing Source: Atser Labs, Houston, Texas, USA.)

ORDERING and RECEIVING TSW . TSW is manufactured in Central Texas, USA. The product is typically shipped in 55 gallon (208 liter) drums, and it can also be shipped in 250 gallon (950 liter) totes. TSW can be ordered in any quantity and can be shipped worldwide.

Ready for shipment in 55 gallon drums

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ESTATES ECO International

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