

Intresoil™ Topical Application for Existing Roads

Combining Soil into an Integrated Whole for Road Stabilization and Construction

In cases where a road has already been constructed or established, Intresoil™ can be topically applied to stabilize the surface layer. The general application rate for topically applied Intresoil™ is 30 gallons of concentrate per 1 mile of road at 20 feet wide (5,280' x 20'). For best results, the application should be performed over 1-2 days with daily surface watering for 5-7 days following the application.

Intresoil™ is topically applied to the surface in three applications. The first application requires approximately 40% of the total Intresoil™ to be applied and allowed to penetrate the surface. The time required between the first and second application is roughly 4-8 hours depending on conditions. The second application requires an additional 40% of the total Intresoil™ to be applied and allowed to penetrate the surface. The time between the second and third application is 4-8 hours or overnight depending on conditions. The third and final application requires the remaining 20% of the total Intresoil™ to be applied and allowed to penetrate the surface. The treated surface requires daily watering for 5-7 days following the Intresoil™ application. For dust control, a light topical application of Soil Sement is needed and should be applied a week or two after the completion of the Intresoil™ application and watering.

Prepare the Intresoil™ Solution

Follow the steps below to create the typical solution required to topically treat and stabilize 1 mile (5,280' x 20') of already established road.

1. Fill the tanker or container with the appropriate volume of water to achieve a 300:1 (water: Intresoil™) dilution. For the first and second application, using the general application rate of 30 gallons of concentrate per mile of road at 20 feet wide, fill the container or tanker with 3,600 gallons of water. For the third application, fill the container or tanker with 1,800 gallons of water. Ensure that the tank is level.
 - a. Although it is typical to dilute the Intresoil™ concentrate at 300:1 (water : Intresoil™ concentrate), dilution rates can change based on soil conditions at the time of installation. An assessment of the soil conditions should be made prior to installing Intresoil™ to determine the optimum dilution.
2. For the first and second applications, dilute 12 gallons of the Intresoil™ concentrate with 12 gallons of water in a 55-gallon drum or other container. For the third application, dilute 6 gallons of the Intresoil™ concentrate with 6 gallons of water in a 55-gallon drum or other container. This is referred to as the pre-dilution solution.
3. Add the pre-dilution solution to the appropriate volume of water in the tanker/container. This is referred to as the diluted solution.
4. Mix the diluted solution in the tanker by circulating for several minutes with a pump. The Intresoil™ diluted solution is ready for application.

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Intresoil™ Application:

1. Pre wet the surface with water to help facilitate the penetration of Intresoil™.
2. For the first application, apply the diluted Intresoil™ solution using 40% of the total application rate.
3. Wait approximately 4-8 hours before applying the second application to allow the first application time to penetrate the surface.
4. Apply the second application using the same volume of diluted solution as the first application.
5. Wait approximately 4-8 hours before applying the third pass to allow the first two applications time to penetrate the surface. If time does not allow the third application to be performed in the same day, wait until the following morning. The third application requires 20% of total application rate.

Use a computerized spray truck to topically apply the Intresoil™ diluted solution to the existing road surface.

- a. The application shall be performed in a manner that uniformly distributes the Intresoil™ diluted solution throughout the entire 1-mile road section.
- b. During application, verify that the Intresoil™ is penetrating the road surface and is not running off. If the Intresoil™ diluted solution is running off the intended surface, reduce the spray rate and apply the remaining Intresoil™ diluted solution in lighter passes.
- c. Stop spraying during maneuvering and turnarounds.
- d. Significantly reduce the spray rate when applying the Intresoil™ diluted solution on slopes to ensure that the Intresoil™ diluted solution does not run off and concentrate at the bottom of the slope.

Maturation:

1. Water the surface once a day for 5-7 consecutive days following the completion of the Intresoil™ application.
 - a. This is a vital step in the maturation process and the final performance of the road.
 - b. You do not need to water for 5-7 days following the installation if it is raining during that period.

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Dust Control:

Once the Intresoil™ has been applied and watered for 5-7 consecutive days, allow an additional 5-7 days before applying the Soil Sement topcoat. The Soil Sement topcoat is to be topically applied to the treated surface at a light rate to seal the surface and prevent dust emissions.

1. Dilute the Soil Sement concentrate in the tanker or container prior to applying. The dilution rate will be determined by a Midwest representative and may vary depending on site-specific conditions.
2. Topically apply the diluted Soil Sement to the treated surface at the recommended application rate.
 - a. The application shall be performed in a manner that uniformly distributes the Soil Sement solution throughout the entire 1-mile road section.
 - b. Due to the surface being stabilized with Intresoil™, multiple light passes may be required to prevent runoff and allow for better penetration. If Soil Sement is running off the surface, reduce the spray rate and allow more time between passes.
 - c. Stop spraying when maneuvering and turnarounds.
 - d. Significantly reduce the spray rate when applying the Soil Sement solution on slopes to ensure that it does not run off and concentrate at the bottom of the slope.