

# TOP-SHIELD APPLICATION GUIDELINES

## For Dust Suppression and Control

### FOR DUST SUPPRESSION:

1. Remove vehicles, equipment, etc. from area to be treated to prevent over-spray damage. Do NOT apply in windy conditions. If over-spray occurs, immediately rinse with plenty of fresh water & wipe away before chemical is allowed to dry—otherwise solution will harden and might not be able to be removed.
2. Prepare the surface to be treated prior to applying diluted Top-Shield solution. For best results:
  - a. repair pot holes, ruts & washboarding if needed, and
  - b. moisten road surface with fresh water to help the diluted solution penetrate to a greater depth.
3. Dilute the Top-Shield concentrate in a water tanker/truck before applying to surface:
  - a. First fill the water tanker one-third full of fresh water—(note maximum capacity of tanker in gallons).
  - b. Add Top-Shield concentrate to the water in the tanker—(See chart below for Dilution Ratios recommended for your traffic load and surface type).
  - c. Finish filling tanker with water. Prevent “foaming” by keeping the fill-hose outlet beneath the surface of the solution in the tank as you add more water (or use an inlet under the tank to fill). Excess foaming can cause inaccuracy in dilution ratios.

\*One drum of Top-Shield = 55 gallons\*

4. The mixture is now ready to be sprayed on your surface at the Application Rates listed in the chart below.
5. For Medium and Heavy Trafficked Roads/Surfaces, a second application is recommended 30 minutes after first application, using the Dilution Ratios listed in the chart below.
6. Wash out water tank, hoses and all equipment used in the mixing/application of Top-Shield. If the chemical solution is allowed to dry without washing out with fresh water, it could adhere to and/or clog equipment.

### DILUTION RATIOS AND APPLICATION RATES

For Dust Suppression	Light Traffic		Moderate Traffic		Heavy Traffic	
	Dilution Ratio	Appl. Rate Gal / Sq.Yd.	Dilution Ratio	Appl. Rate Gal / Sq.Yd.	Dilution Ratio	Appl. Rate Gal / Sq.Yd.
Crushed Stone	10 : 1	0.43	8 : 1	0.36	5 : 1	0.24
Soil	7 : 1	0.32	5 : 1	0.24	5 : 1	0.24

#### TRAFFIC LOADS:

- **Light Duty** = Automobiles and Pickup Trucks (ex: parking stalls)
  - **Moderate Duty** = Delivery & Maintenance Vehicles (ex: travel lanes and stalls)
  - **Heavy Duty** = 18 Wheelers, Buses, Dump Trucks (ex: entrance and travel lanes)
- If your project experiences Mixed Duty Traffic, dilution rates for heavier traffic should be considered.



**FOR DUST CONTROL:** Dust Control requires the diluted Top-Shield solution to be “mixed-in” with road surface soil and uses the same dilution ratios as with Dust Suppression.

1. Grade and level the roadway surface with a slight crown in the middle of roadway.
2. Scarify the surface to a depth of 3” to 4”.
3. Dilute the Top-Shield concentrate in a water tanker using the same procedure as for Dust Suppression.
4. Apply the Top-Shield solution at the rate listed in the Mixture Depths & Application Rates chart below. Apply twice at 30 minute intervals.
5. Using a reclaimer or mixer, mix the soil and Top-Shield solution at the proper depth for traffic load and soil type as listed in the chart below.  
Add additional water if necessary to bring the treated soil to optimum moisture content (OMC).
6. While maintaining OMC, compact mixed soil using a smooth drum vibratory compactor or a heavy ballasted pneumatic tire 15-ton roller.
7. Finish surface to lines, grades and uniform sectional thickness with slight crown for proper surface drainage.
8. Apply a final spraying of diluted Top-Shield and cure for 3-6 hours before allowing traffic.
9. Wash out water tank and hoses and rinse off all other equipment used in the mixing and application process. If the chemical solution is allowed to dry without washing out/rinsing with fresh water, it could adhere to and/or clog equipment.

### MIXTURE DEPTHS AND APPLICATION RATES

For Dust Control	Light Traffic		Moderate Traffic		Heavy Traffic	
	Mixture Depth	Appl. Rate Gal / Sq.Yd.	Mixture Depth	Appl. Rate Gal / Sq.Yd.	Mixture Depth	Appl. Rate Gal / Sq.Yd.
Crushed Stone	Top 2” to 4”	0.43	Top 4”	0.36	Top 4” to 6”	0.24
Soil	Top 4”	0.32	Top 4” to 5”	0.24	Top 4” to 6”	0.24

*This information is intended to be used as a guideline only—as all roadways / projects are different and may require variances in these procedures for effective dust suppression and control. Therefore, with each job specific project, it is the responsibility of the project designer / manager to determine the most appropriate method, material and equipment needed to meet their project requirements and specific needs. Base-Seal recommends pre-testing a portion of your road / surface to help in making these determinations.*

