



Quality Erosion Control Products

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THE TOPOGRAPHIC INDEX GUIDE

The purpose of the Topographic Index Guide (TIG) is to provide a more accurate estimate of the surface area to be treated with hydraulic applications. Using the TIG, designers and contractors can take into account surface conditions which will require an increase in hydraulic components in order to gain effective coverage at the rate of material specified.

Explanation of Effective Area/Effective Coverage

It is important to understand that although the *effective area* increases due to the greater accuracy in estimation using the TIG, the amount of hydraulic material applied per unit area remains the same.

For example:

On a 5:1 slope of standard loam soil, a 3,000 lb. per acre application of Soil Guard ® is appropriate and *effective coverage* (See Table); however,

If that same 5:1 slope has been track-walked or furrowed, the surface area increases by 20%, requiring an additional 600 lbs. per acre (3,600 total) of Soil Guard ® to achieve *effective coverage* (See Table).

Similarly, areas estimated from plan view will always be less than actual *effective area* if slope gradient is not taken into consideration. A 3:1 slope increases effective area needing treatment by 6%, a 2:1 slope by 12%, etc. (See Table).

Cumulative Impact: Using the TIG to Estimate Application Rates

As can be seen in the Table, the effects of slope gradient and surface texture are cumulative; in other words, the increase in surface area due to slope gradient is added to the increase in surface area due to a topographic factor. Some adjustments have been made in the estimated based on actual field trials.

Using the TIG is a simple, three step process:

1. Estimate the slope gradient (i.e. 4:1, 3:1, 2:1, stepped, etc.) and find the appropriate category on the left side of the Table (*Adjustment for Slope*);
2. Find the texture condition which best describes the soil surface (i.e. Standard Loam, Chiseled, Sheeps-foot Roller, etc. (*Topographic Factor*);
3. Where the *Adjustment for Slope* row intercepts the *Topographic Factor* column is the percentage increase in surface area (in parentheses) and the increased pounds of Soil Guard ® required for effective coverage (shown as #).

The Topographic Index Guide

TOPOGRAPHIC FACTOR

	Standard Loam	High Silt	Non- Cohesive Sand	Loose Gravel (C-2")	Chiseled or Disked	Medium Gravel (2-4")	Track- Walked / Furrow	Cobble (4-6")	Sheeps- Foot Roller		
ADJUSTMENT FOR SLOPE	5:1 or Flatter	(0) #3000	(10) #3,300	(10) #3,300	(15) #3,450	15 #3,450	(20) #3,600	(20) #3,600	(25) #3,750	(25) #3,750	
	4:1	(3) #3,100	(12) #3,350	(12) #3,350	(17) #3,500	(17) #3,500	(21) #3,650	(21) #3,650	(27) #3,800	(27) #3,800	
	3:1	(6) #3,200	(15) #3,500	(15) #3,500	(20) #3,600	(20) #3,600	(25) #3,750	(25) #3,750	(30) #3,900	(30) #3,900	
	2:1	(12) #3,350	(18) #3,550	(18) #3,550	(25) #3,750	(25) #3,750	(30) #3,900	(30) #3,900	(35) #4,050	(35) #4,050	
	1.5:1	(20) #3,600	(20) #3,600	(20) #3,600	(30) #3,900	(30) #3,900	(35) #4,050	(35) #4,050	(40) #4,200	(40) #4,200	
	1:1	(40) #4,200 Split Applic.	(40) #4,200 Split Applic.	(40) #4,200 Split Applic.							
	4:1 Stepped	(20) #3,600									
	3:1 Stepped	(25) #3,750									
	2:1 Stepped	(35) #4,050									
	1.5:1 Stepped	(40) #4,200									
1:1 Stepped	1:1 #4,200										

(%) INCREASE and (#) POUNDS PER ACRE