

# General Information & Terms

## FORMULAS FOR ESTIMATING TRACK MATERIAL

TO FIND	USE THIS
<b>Weight per piece of rail</b>	$\frac{\text{Length of rail} \times \text{weight per yard}}{3}$ <p>Example: 100 lb. rail 39' long</p> $\frac{100 \times 39}{3} = \frac{3900}{3} = 1300 \text{ lbs. per piece}$
<b>Weight in net ton per piece of rail</b>	$\frac{\text{Weight per piece}}{2000}$ <p>Example: using information above for 100 lb. rail:</p> $\frac{1300 \text{ (weight per 39' of 100 lb. rail)}}{2000} = .65 \text{ net ton}$
<b>Weight in net tons for several pieces of rail</b>	$\frac{\text{Number of pieces} \times \text{length per piece} \times \text{weight per yard}}{3}$ <p>divide the answer above by 2000</p> <p>Example: 30 pieces 100 lb. rail 39' long</p> $\frac{30 \times 39 \times 100}{3} = \frac{117,000}{3} = 39,000$ $\frac{39,000}{2000} = 19.5 \text{ net tons}$
<b>Bars</b>	Joint Bars are normally ordered 1 pair per piece of rail
<b>Number of ties</b>	$\frac{\text{Length of track}}{\text{tie spacing}} = \text{number of ties}$ <p>Example: <math>\frac{300'}{2}</math> (length of track) = 150 ties needed  (24" tie spacing) for 300' of track</p>
<b>Number of tie plates</b>	Use the formula above to find the number of ties. Multiply number of ties by 2.
<b>Spikes</b>	<p>Average 3 spikes per plate for double shoulder plates.  Average 2 spikes per plate for single shoulder plates.</p> <p>Example: 600 tie plates with an average of 3 spikes per plate</p> $600 \times 3 = 1800 \text{ spikes}$ <p>Since spikes are normally sold in 200 lb. kegs, we would next take the average number of spikes per keg (245 <math>\frac{5}{8}</math>" x 6" or 320 <math>\frac{9}{16}</math>" x 5<math>\frac{1}{2}</math>" per 200 lb. keg) and divide the number of plates by this.</p> $\frac{1800 \text{ (number of plates)}}{245 \text{ (spikes per keg)}} = 7.34$ <p>7.34 would be rounded to 8 kegs</p>
<b>Track Bolts</b>	<p>Number of holes in bars <math>\times</math> number of pairs of bars.</p> <p>Example: 100 pair of 4 hole joint bars require 400 bolts.</p> $100 \times 4 = 400$ <p>Refer to bolt information in catalog for quantities of bolts per keg.</p>
<b>Lockwashers</b>	Order 1 per bolt (sold by piece or keg).
<b>Rail Anchors</b>	<p>Rail is normally anchored 4 anchors per tie, every third tie, or as dictated by railroad servicing track.</p> $\frac{600 \text{ (number of ties)}}{3} = 200$ <p>200 ties to be anchored <math>\times</math> 4 = 800</p>

