



Waste calculation methods:

1. By **Gross quantity**(takeoff™)

The first method looks at waste as the percentage of material purchased which ends up in the waste bin at the saw. For example, if you require 100 units of a material and want a waste of 20% this does not mean you purchase 120 units instead you purchase 125 units because removing 20% will give you 100 units. Panel optimizers view waste by this method which is why takeoff™ follows the same.

2. By Net quantity

The second method looks at waste as the quantity of the extra material you need to purchase. For example, if you require 100 units of a material and want a waste of 20% this means you buy 120 material units. Thus the Gross waste would be 16%(20/120*100). This view is typically chosen by solid lumber people.

Both methods get to the same final outcome but approach it differently, similar to the distinction between margins and markups. **takeoff™** uses the first model to describe it's waste however if you need to convert from the second model you can use the following formula to calculate the correct waste percentage. **takeoff™** uses the first model to describe it's waste however if you need to convert from the second model you can use the following formula to calculate the correct waste percentage.

To convert from waste relative to *total required* versus *total consumed*, use the following formula

$$TK_waste = (100 * Extra) / (100 + Extra).$$

The following table shows some values converted.

Net ExtraTK_Waste(Gross)

| | |
|-----|-----|
| 20% | 16% |
| 35% | 26% |
| 45% | 31% |
| 55% | 35% |

Note: Summary screens show required quantities (no waste) but costs show include the cost for waste as this is a cost of the final product.