

Cargo Restraint Product Comparison

Don't Be Fooled by High WLL Claims! Understand How WLL is Determined and Compare Apples to Apples

Working Load Limit is being determined very differently by one company in our industry, giving its products a seemingly high WLL. Following are descriptions of the the two methods used and an “apples to apples” comparison of the WLLs.

Weakest Component Testing assumes forces vary dramatically on each strap depending upon changes in speed and direction. In an accident, any one strap may momentarily become the de facto Total Assembly. WLL is determined by dividing the straight pull tensile of the weakest component in an individual strap by a safety factor of 3. Thus, this method provides an applied maximum WLL for the absolute worst case scenario.

Total Assembly Testing assumes all forces engage equally on all straps, not accounting for changes in speed and direction. Accidents are not assumed. It is conducted by a basket method, where weight is added on top of the net slowly until failure is reached. WLL should be determined using the max failure and dividing it by a safety factor of 3 (not 1.5 as one company does). Thus, this method provides a theoretical maximum WLL in a controlled environment.

WLL Ratings	Testing Method Used	Advertised WLL	Weakest Component WLL	Total Assembly WLL* Safety Factor of 3	Total Assembly WLL* Safety Factor of 1.5
Bednet	Weakest Component Safety Factor 3	450 lbs	450 lbs	1857 lbs*	3704 lbs - Comparison Only Disclaimer: DO NOT USE
Quarantine	Weakest Component Safety Factor 3	493 lbs	493 lbs	1967 lbs*	3944 lbs - Comparison Only Disclaimer: DO NOT USE
Gorilla/ SafetyWeb	Total Assembly Safety Factor 1.5	1200 lbs - 1500 lbs	Not Disclosed**	600 lbs*	1200 lbs -1500 lbs Stated and Advertised WLL

Weakest Component Testing looks at worst case scenario, takes the lowest possible failure and divides by 3. Total Assembly Testing looks at best case scenario, takes the highest possible failure and should divide by 3.

*BEDNET® does not sanction the Complete Assembly Test as a safe assessment of WLL. BEDNET® posts these figures for comparison only.

**BEDNET Tested a Gorilla/SafetyWeb net in its lab, and found failures just over 750 lbs. By BEDNET's Methodology, the WLL would be a Max of 250 LBS, however, the net is of polypropylene construction, a fiber not recommended for most safety applications so BEDNET would not rate this product.