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# ORBIS' 40 x 48 Odyssey Pallet Completes 400 Cycles in Life-Cycle Analysis

**The 40 x 48 Odyssey plastic pallet drastically outperforms wood pallets by completing 400 cycles without failure.**

The Virginia Tech Center for Packaging and Unit Load Design has a world renowned testing facility for packaging systems. Virginia Tech conducted a FasTrack simulation and life-cycle analysis to quantify the durability of ORBIS' 40 x 48 high pressure Odyssey plastic pallet compared to a standard whitewood pallet. The analysis reveals the Odyssey as an economical, environmental and efficient alternative to wood pallets that will better help companies achieve their operations goals and desired ROI.



11 Cycles



400 Cycles

## FASTRACK TEST RESULTS

The FasTrack life-cycle analysis includes a series of simulated warehouse handling tests and a pallet inspection to determine structural durability, as specified by ISO's 18613-2003 failure guidelines. Simulated situations include idle pallet storage, palletization, shipment, transportation and receipt. The analysis revealed the Odyssey significantly outperformed wood pallets by completing an average of 400 cycles without failure, in comparison to an average of only 11.

## FASTRACK TESTING SEQUENCE

- 1** Pallet is loaded with a weight of 2,300 lbs.
- 2** Pallet is lifted and dragged 2 ft. backwards.
- 3** Pallet is lifted by forklift and loaded into simulated semi-trailer.
- 4** Pallet is lifted by electric hand truck and loaded into simulated semi-trailer.
- 5** Pallet is pin wheeled and loaded into simulated semi-trailer.
- 6** Steps 1-5 repeated for both the 40" and 48" sides.
- 7** Pallet is pushed 30 ft. across concrete floor using forklift.
- 8** Pallet is lifted by forklift and set down onto static rack spanning length of pallet.
- 9** Pallet is set on another unitized load to simulate stacking.
- 10** Pallet is lifted by forklift and pushed 20 ft. across the concrete floor.
- 11** After every five cycles, the pallet stringer is impacted by the fork tines.
- 12** After every 10 cycles, empty pallets are manually dropped from a height of 5 ft.

## PLASTIC PALLET BENEFITS



Efficient & Economical



Durable & Ergonomic



Hygienic & Cleanable



Safety & Performance



Reusable & Recyclable