

Plastic Pallets

In recent years, many manufacturers with closed-loop distribution systems have converted from wooden to reusable plastic pallets in response to financial and technological influences. Closed-loop distribution systems are favorable for reusable plastic pallets since trucks that drop off supplies on a frequent and regular basis return to the facility where pallet loads are assembled. However, companies with non-closed loop distribution systems may benefit from the use of plastic pallets as well.

Plastic pallets are often made of recycled content plastic and molded of tough, reinforced nylon that allows them to sustain a static load of 30,000-40,000 lbs. These pallets are compatible with most equipment such as standard forklifts/lift trucks, standard pallet jacks/racks, and automatic palletizers. Most plastic pallet producers offer a 5-year warranty on plastic pallets, and one study shows that they last for more than 300 trips.

Some of the problems once associated with the use of plastic pallets have been overcome. Many companies do not use plastic pallets for shipment outside the plant because they are more costly than wooden pallets and are not always returned to the owner. They are also hard to retain and control within the internal system. To address this issue, some companies use bar-coding systems to track the location of the pallets. Since leasing bar-code tracking systems can cost \$150-\$200 per month, companies that need to track hundreds or thousands of pallets would find these systems cost effective.

For smaller companies, the use of a deposit system creates an incentive for transporters to return plastic pallets to the company that purchased them. It is also possible to imprint the company's name on the plastic pallets. These are just a few of the innovative ways in which companies are ensuring that they retain the plastic pallets that they purchase.

Another concern with plastic pallets is that they can have slick surfaces. In response to this problem, plastic pallet producers are instituting changes to plastic pallet production. Some manufacturers add sand in the plastic mix when producing the pallets while others add a non-skid strip to the surfaces. Both of these practices reduce product slippage and damage.

Benefits

The advantages of plastic pallets over wooden can include:

- Labor savings—eliminates need for pallet repair
- Recycle/ reuse capability
- Extended life
- Lower disposal costs
- Avoids insect-related restrictions and treatments required of solid wood packaging materials (relevant only in import and certain export applications).

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**TABLE 1: PERFORMANCE COMPARISON OF
AVERAGE WOODEN VS. PLASTIC PALLETS**

DESCRIPTION	WOODEN PALLETS	PLASTIC PALLETS
Initial cost	\$5–12	\$35-60
Weight	60 lbs.	50 lbs.
Estimated life	5 trips	Hundreds of trips
Repair costs	\$6/month/per pallet	\$0 - No repair costs
Strength	Same	Same
End-use	Recyclable for parts; energy recovery (hog fuel); compost or mulch	Limited recycling opportunities
Storage	Some deterioration	No apparent effect when stored outside

While a plastic pallet may cost four to twelve times more than a wooden pallet, companies with closed-loop distribution systems may save money because plastic pallets last longer. Furthermore, the company will save money due to less frequent repair needs, and may save money on waste management costs, since, over time, less waste will be generated.

For a case study of plastic pallet use, [click here](#).

Credits: Alameda County (CA) Waste Management Authority & Alameda County Source Reduction and Recycling Board.

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