

Material Handling in the 21st Century for the Rubber & Plastic Industry

The SLIP-TRAY Pallet™ An Alternative for a Pallet Base

A Supplement to
NAPPO STANDARD FOR
PHYTOSANITARY MEASURES
Presented To
THE INTERNATIONAL RUBBER STUDY GROUP
ANTWERP, BELGIUM
NOVEMBER 10, 2000

envirOpak™ SLIP-TRAY Pallet™ An economical and user-friendly alternative to a wooden pallet base

envirOpak™ Inc. is an independent company that has developed a wood-free packaging system. This system is presently being used by companies within the agriculture, chemical, plastic, and rubber industry. envirOpak's™ SLIP-TRAY Pallet™ is being used to ship beans, cocoa, coffee, flour, peanuts, resin, sugar, synthetic & natural rubber, as well as many other products between and within Belgium, Canada, England, France, Germany, Indonesia, Japan, Malaysia, Mexico, and the United States.

The design of the SLIP-TRAY Pallet™ has many advantages for industries that are currently using wooden pallets. With the rounded patented lip design, pallets of products can be easily loaded using common tapered forks. This design also works efficiently in applications that utilize a push-pull forklift attachment. The four sides enable FIBC's (super sacks), bags and large boxes (Gaylords) to fit inside the SLIP-TRAY Pallet™.

These sides prevent items from shifting as is common with pallets and normal slip sheets.

The SLIP-TRAY Pallet's™ four sidewalls protect the bottom row of product. These sidewalls also enable the stretch or shrinkwrap to encapsulate the product on all six sides.

SLIP-TRAY Pallet™ is pre-creased with interlocking tabs for quick and easy assembly. SLIP-TRAY Pallets™ can be shipped partially assembled, if required. The SLIP-TRAY Pallet™ is normally made from recycled plastic resin and can be 100% recycled back into itself.

The rounded lip enables the forklift operator to easily place the tapered forks or push-pull platens under the SLIP-TRAY Pallet™ to scoop the product unit. The resilience of envirOpak's™ plastic SLIP-TRAY Pallet™ enables the use of regular tapered forks to move the product.

envirOpak™ will ship the SLIP-TRAY Pallet™ directly to the customer's factory or to the supplier. SLIP-TRAY Pallet™ that are no longer useful will be picked up periodically at the end user locations by envirOpak™ and recycled. By recycling our original plastic, we will maintain a superior quality sheet at an economical cost along with eliminating disposal cost for the user.

SLIP-TRAY Pallet™ Advantage for the Natural Rubber Producer & Consumer

1. The consumer purchases the SLIP-TRAY Pallet™. This eliminates the producer's need to purchase wood pallets. This is a savings for the producers and, in effect, increases the amount paid by the consumer for the producer's natural rubber.
2. SLIP-TRAY Pallet™ eliminates the wood from the natural rubber packaging process. This is a savings for the consumer.

3. The producer enjoys increased cash flow as he does not have to finance the cost of the wood pallet while it sets in inventory awaiting use and in storage while awaiting shipment of the rubber. This is a saving for the producer.
4. SLIP-TRAY Pallet™ weighs less than 3 kilos versus 25 - 80 or more kilos for a wood, plastic, and metal pallet base or metal box. The use of the SLIP-TRAY Pallet™ as a packaging base permits rubber to replace the weight differential between the wood, plastic, and metal pallet or metal box. In areas where total container weight is an issue due to road and/or bridge laws, the use of SLIP-TRAY Pallets™ will allow 16 units of natural rubber to be shipped in a container versus 14 units with the other methods.
5. The producer's cost for a plywood and metal captive TLP is quickly recouped. After these initial uses, the product has a savings.
6. This reduction in weight will allow, in certain shipping locations, the consumer to increase the quantity of rubber shipped and still meet local bridge weight laws. This is a savings for the consumer.
7. The producer will make his rubber more desirable to the consumer and he is more likely to be placed on the large consumer approved suppliers list if he uses the SLIP-TRAY Pallet™ type packaging. This results in an increase for the producer, as he can command a better price for his rubber if he is placed on the large consumers approved suppliers list or the large tire consumers "PRIME" or "SUPERIOR" list.
8. The producer benefits from increased warehouse space due to less storage requirements for the SLIP-TRAY Pallet™. 1,200 SLIP-TRAY Pallets™, comprised of three pallets containing 400 ST's each, and tripled stacked to 5 feet high, take up an area of about 5' X 6' or 30 square feet of warehouse space.
1,200 wood natural rubber pallets stacked in 10 foot high columns would take 50 columns and encompass about 1,000 square feet of floor space. It would be obvious that metal and plastic pallets, as well as metal boxes, require similar warehouse space.
Therefore, the producer frees up floor space to store an additional 60 single stacked units or up to 180 units of rubber if a racking system is employed. This is a cost benefit to the producer, as he saves in investment for additional building construction costs.
Moreover, these 1,200 SLIP-TRAY Pallets™ are easily kept inside clean and dry. The producer may be tempted to store the wooden and metal pallets bases and metal boxes outside where they will become wet and/or rusty.
9. Wood pallets manufactured from unseasoned lumber or from rain results in wet and oxidized rubber. This results in claims by the consumer and the trader. Less claims results in a savings to the producer.
10. It is well recognized in the industry that the practice of using unseasoned and/or wet wood pallet bases and rusty metal pallets or metal boxes and/or rusty water is an issue in itself. It has serious monetary and quality ramifications for both the producers and the consumer.
Natural rubber which becomes wet from unseasoned wood or pallets stored outside in the rain is a quality issue for both the producer and the consumer.
However, rubber that becomes wet and oxidized from rusty water is an even greater issue for the rubber consumer who is using that rubber to manufacture a product for the automotive industry.
To be able to eliminate or minimize this as a quality issue has substantial savings benefit for both the producer and the consumer.
11. The SLIP-TRAY Pallet™ allows the unit to be totally encapsulated. The producer will have less claims for wet and oxidized rubber when using the SLIP-TRAY Pallet™. This is a savings for the producer.
12. The producer will have less claims for wood contamination when using the SLIP-TRAY Pallet™. This is a savings for the producer.
13. The producer will have a new clean packaging unit each time when using the SLIP-TRAY Pallet™. No contamination from carbon black, rubber chemicals or other type contamination that may have attached itself to the reused metal or plastic pallet or metal box. The use of the SLIP-TRAY Pallet™ eliminates contamination and gives the producer greater ability to defend himself to ward off claims for discount. This is a savings for both the producer and the consumer.

14. The producer is required to remove sawdust shavings, repair/replace broken boards and inspect for protruding and bent nails when using wooden pallets bases. Additionally, the producer must inspect and clean, where necessary, metal or plastic pallets and metal boxes. Since the SLIP-TRAY Pallet™ is always a new unit, the producer does not need to inspect and clean the unit. This is a savings for the producer.
15. SLIP-TRAY Pallet™ meets the USDA's requirement to ship food grade products. This gives the consumer extra capabilities to meet the automotive and chemical industry requirements to eliminate contamination.
In view of the current problem with tire failures and recalls, this will become an ever-increasing issue for the rubber and automotive industry. The buying public's perception as to what the tire and automotive industries are doing to ensure the consumers' safety for the products they are purchasing, for their family to ride on and ride in will increase. Further, it will become paramount that these industries are able to employ manufacturing standards to make products to meet consumers' demands and government's requirements and new regulations.
16. The SLIP-TRAY Pallet™ that is currently manufactured for use in packaging natural rubber, while originally made from virgin polymer, is recycled into itself at a percentage of original content. The producer and the consumer, by using the SLIP-TRAY Pallet™, have a product that will assist with meeting new government recycled packaging content requirements.
Meeting government recycle content packaging requirements will be a savings for the consumer as well as the natural rubber producer.
17. The producer must assemble the SLIP-TRAY Pallet™ prior to use. This takes approximately one minute. This is an incidental and minimal increase cost to the producer.
18. The present SLIP-TRAY Pallet™ distribution system requires the producer to pick up SLIP-TRAY Pallet™ at the agents' storage areas at the port and transport to his factory. This represents a cost increase to the producer.
19. If stuffing occurs at the port, the producer must retrieve his captive TLP pallet from the port or warehouse loading location. This is a cost increase to the producer.
20. The trucking company, whether owned by the producer or an outside contractor, normally will allow for very competitive return rates to deliver the SLIP-TRAY Pallet™ and captive pallets to the producer's factory.
This will often eliminate and/or minimize the cost increase for the producers for the items listed as #15 & #16.
21. Many producers stuff containers at their factory. Therefore, the issue of returning the captive TLP pallet is a not an issue in that case.
22. The SLIP-TRAY Pallet™ was developed for shipping natural rubber in containers. However, it can be easily adapted so it can ship on breakbulk vessels.