



Rubberized Composite Pallets

Durable logistics pallets made from recycled tires and plastic

THE OPPORTUNITY

The U.S. generates roughly 330 million scrap tires and 73 million tons of plastic waste every year, and most of it is landfilled, stockpiled or incinerated. At the same time, about 2 billion wooden pallets are in circulation and 500 million worn-out pallets are replaced each year. Around half are used once and discarded, because galvanized nails make them hard to recover, and pallet production consumes about 7.6 billion board feet of lumber a year. GTG's composite rubberized pallets turn the first problem into the answer to the second.

THE TECHNOLOGY

Used tire crumb rubber and waste plastic are blended with a specially developed chemistry into a composite **thermoplastic elastomer (TPE)**, a proven material with a long track record in automotive, molded goods and industrial applications. The TPE is injection-molded on purpose-built equipment into logistics pallets made to each customer's size, deck profile, color and load rating. The pallets are ~100% recycled and can be reclaimed and re-molded at the end of their service life, closing the loop. Roughly 60% of a passenger tire is reclaimable rubber, and each pallet uses 2–4 kg of crumb rubber.

STANDARD PALLET MODELS

Model	Dimensions (mm)	Weight	Entry	Dynamic load	Static load	Per 16 m trailer
Nestable A	1016 × 1220 × 146	18 kg	4-way	2,000 kg	14,000 kg	1,000+
Nestable B	1143 × 1143 × 140	18 kg	4-way	2,000 kg	14,000 kg	900
Nestable C	1016 × 1220 × 150	22 kg	4-way	2,000 kg	12,000 kg	850+
CP7 Petrochemical	1300 × 1100 × 130	—	4-way	1,500 kg	4,000 kg	—

Fully configurable: any size, color and deck type on demand, including USDA/FDA-approved food-grade material and rackable, nestable and solid-deck options.

KEY BENEFITS

- **Sustainable by design.** ~100% recycled from diverted tire and plastic waste, and recyclable again at end of life.
- **Hygienic and damage-free.** No nails, splinters, rot or water absorption. Surfaces are sealed and washable for HACCP-sensitive supply chains.
- **Trade-ready.** Exempt from ISPM-15 fumigation, removing paperwork and border delays on export shipments.
- **Lower return freight.** Nestable designs stack tight, fitting 850 to 1,000+ pallets per 16 m trailer.
- **Built to spec.** Any footprint, color or load rating, with an embedded slot for GPS and RFID tracking devices.
- **Asset, not expense.** Long service life and residual resale value, where wood is a recurring cost.

PALLET RANGE

Nestable	Solid-deck & rackable	4-way entry
Stacks tight to cut return-freight costs	Washable, durable and hygienic, built to cycle	1,500–2,000 kg dynamic load capacity

WOODEN VS. COMPOSITE PALLETS

Attribute	Wooden pallet	Composite rubberized pallet
Hygiene (HACCP)	Low	High
Water absorption	Absorbs water	None
Nails and splinters	Damage goods	None
ISPM-15 fumigation	Required	Exempt
RFID / GPS ready	Limited	Yes
Design flexibility	Low	Any size and shape
Recyclability	Low	~100% recyclable
Residual value	Pure cost	Resale value
Service life	Short	Long and durable

INTEGRATED PRODUCTION LINE

Four modular stages, all USA- or EU-built and designed and commissioned by a team with 30+ years in the field: **(A)** tire shredding into clean crumb rubber, **(B)** plastic recycling into feedstock at 5 t/hr per line, **(C)** TPE compounding and pelletizing, and **(D)** injection molding into finished pallets. Each molding machine runs on a 3-phase, 480 V, 2,000 A supply with interchangeable molds for any size, shape or load rating. A standard location runs three machines producing up to 750,000 pallets per year.

MARKET OPPORTUNITY

- **80% of U.S. commerce moves on pallets**, and 500 million wooden pallets are replaced every year.
- **The global plastic-pallet market** is projected to grow from \$7.0B (2021) to \$10.4B (2028), a 5.6% CAGR, with composite pallets positioned for premium, sustainability-driven demand.
- **Strong returns.** Program projections show over 25% annual ROI, with payback in under 2.5 years.

TARGET APPLICATIONS

Food and beverage distribution • Pharmaceutical and hygienic supply chains • Export and international shipping • Petrochemical and industrial logistics • Retail and closed-loop pallet pools • Agricultural produce handling

WHY GTG

GTG brings the technology transfer, manufacturing setup and testing lab needed to take composite pallets from waste stream to production, backed by a team with 220+ years of combined experience that is molding production pallets today.

Next step: Share your pallet volumes, dimensions, load ratings and target market to discuss supply or a production partnership.

CONTACT

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