

Choosing the Right Pallet to Ensure a Clean and Safe Supply Chain

Presented by:

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About Me

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Agenda

- How can pallets promote safety?
 - Cleanliness, FSMA
 - General safety
- Pallet Essentials
 - Racking Configurations
 - Load Types
 - Design
 - Materials & Additives
- Summary

What are the most important factors in your decisions to use a certain type of pallet?



Source: 2017 Pallet Market Evaluation Study, Peerless Research Group & Modern Materials Handling

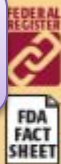
FDA FOOD SAFETY MODERNIZATION ACT



Food Safety Modernization Act (FSMA)

- **WHAT is the concept behind FSMA?** *Preventing production of contaminated food is much more effective than detection of contaminated goods once in distribution.*
- **WHY FSMA?** Series of high profile food safety outbreaks
- **WHO is affected?** All registered facilities. Any facility engaged in the manufacturing, processing, packing or holding food for the consumption in the United States shall be registered. Includes foreign facilities.
- **WHO is implementing/enforcing?** FDA is the driving force behind FSMA and will have enhanced enforcement powers.
- **WHEN?** Compliance to be staggered over several years.

Sept
2016



Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food

Date of Final Rule: 9-17-15

Covered facilities must establish and implement a food safety system that includes an analysis of hazards and risk-based preventive controls. Operations defined as farms are not subject to the Preventive Controls rule.

Compliance Deadline: General: 1 Year from final rule. • Small Business (<500 Employees): 2 years from final rule. • Very Small Business (<\$1 Million in sales): 3 years from final rule.

Accreditation of Third-Party Certification Bodies to Conduct Food Safety Audits and to Issue Certifications

Date of Final Rule: 11-27-15

This rule establishes a voluntary program for the accreditation of third-party certification bodies (auditors) to conduct food safety audits and issue certifications of foreign facilities and the foods for humans and animals they produce. These requirements will help ensure the competence and independence of the accreditation bodies and third-party certification bodies participating in the program.

Compliance Deadline: General: After Model Accreditation Standards. • Small Business (<500 Employees): NA. • Very Small Business (<\$1 Million in sales): NA.



After Model Accreditation Standards

Sept
2016



Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Food for Animals

Date of Final Rule: 9-17-15

Covered facilities must establish and implement a food safety system that includes an analysis of hazards and risk-based preventive controls. Operations defined as farms are not subject to the Preventive Controls rule. There are different compliance dates for the preventive controls (PC) versus current Good Manufacturing Practices (cGMPs) requirements of the rule.

Compliance Deadline: General: 1 year from final rule (cGMPs), 2 years from final rule (PC). • Small Business (<500 Employees): 2 years from final rule (cGMPs), 3 years from final rule (PC). • Very Small Business (<\$1 Million in sales): 3 years from final rule (cGMPs), 4 years from final rule (PC, except for records to support its status as a very small business).



FSMA Rules

Sanitary Transportation of Human and Animal Food

Date of Final Rule: 4-16-16

With some exceptions, the final rule applies to shippers, receivers, loaders and carriers who transport food in the United States by motor or rail vehicle, whether or not the food is offered for or enters interstate commerce. Companies involved in the transportation of food intended for export are covered by the rule until the shipment reaches a port or U.S. border.

Compliance Deadline: General: 1 year from final rule. • Small Business (<500 Employees and <27.5 Million in sales): 2 years from final rule. • Very Small Business (<\$1 Million in sales): NA.



Apr
2017

Nov
2016



Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption

Date of Final Rule: 11-27-15

Key requirements include agricultural water, biological soil amendments, sprouts, domesticated and wild animals, worker training, health and hygiene, and equipment, tools and buildings.

Compliance Deadline: General: 2 years + 60 days from final rule. • Small Business (\$250K - \$500K in sales): 3 years + 60 days from final rule. • Very Small Business (\$25K - \$250K in sales): 4 years + 60 days from final rule.

May
2017



Foreign Supplier Verification Programs for Importers of Food for Humans and Animals

Date of Final Rule: 11-27-15

For the purposes of the Foreign Supplier Verification Program, an importer is the U.S. owner or consignee of a food offered for import into the United States. If there is no U.S. owner or consignee, the importer is the U.S. agency or representative of the foreign owner of consignee at the time of entry, as confirmed in a signed statement of consent.

Compliance Deadline: General: 18 months from final rule. • Small Business (<500 Employees): NA. • Very Small Business (<\$1 Million in sales): 18 months from final rule.

Mitigation Strategies To Protect Food Against Intentional Adulteration

Date of Final Rule: 5-27-16

With some exceptions, this rule applies to both domestic and foreign companies that are required to register with the FDA as food facilities under the Federal Food, Drug, and Cosmetic Act and is designed to primarily cover large companies whose products reach many people, exempting smaller companies. It does not cover farms.

Compliance Deadline: General: 3 years from final rule. • Small Business (<500 Employees): 4 years from final rule. • Very Small Business (<\$10 Million in sales): 5 years from final rule.



May
2019

Presented by: **FoodSafety**

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Types of Pallets

Rackable

- Designed to be stored in racks with minimal to no deflection

Stackable

- Pallets with bottom decks that allow for double stacking
- NOT designed for unsupported racking

Nestable

- Lightweight pallet for lighter duty loads
- Often have 9 legs that nest inside one another = best return ratio

Understand the Racking Requirements



Unsupported



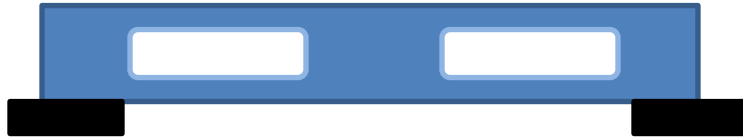
Partially Supported



Fully Supported

Understand the Racking Requirements

40" side



48" side



*"in the 40 direction" OR
"on the 48 sides"*

*"in the 48 direction" OR
"on the 40 sides"*

What is acceptable deflection?

Side of pallet that is unsupported MINUS length of the pallet resting on the support TIMES 1.9%

Example: (40" – 2" – 2") X 0.019 = 0.684"

Why are the racking requirements important?



Edge rackable pallets can cost 50% than stackable pallets

Load Types



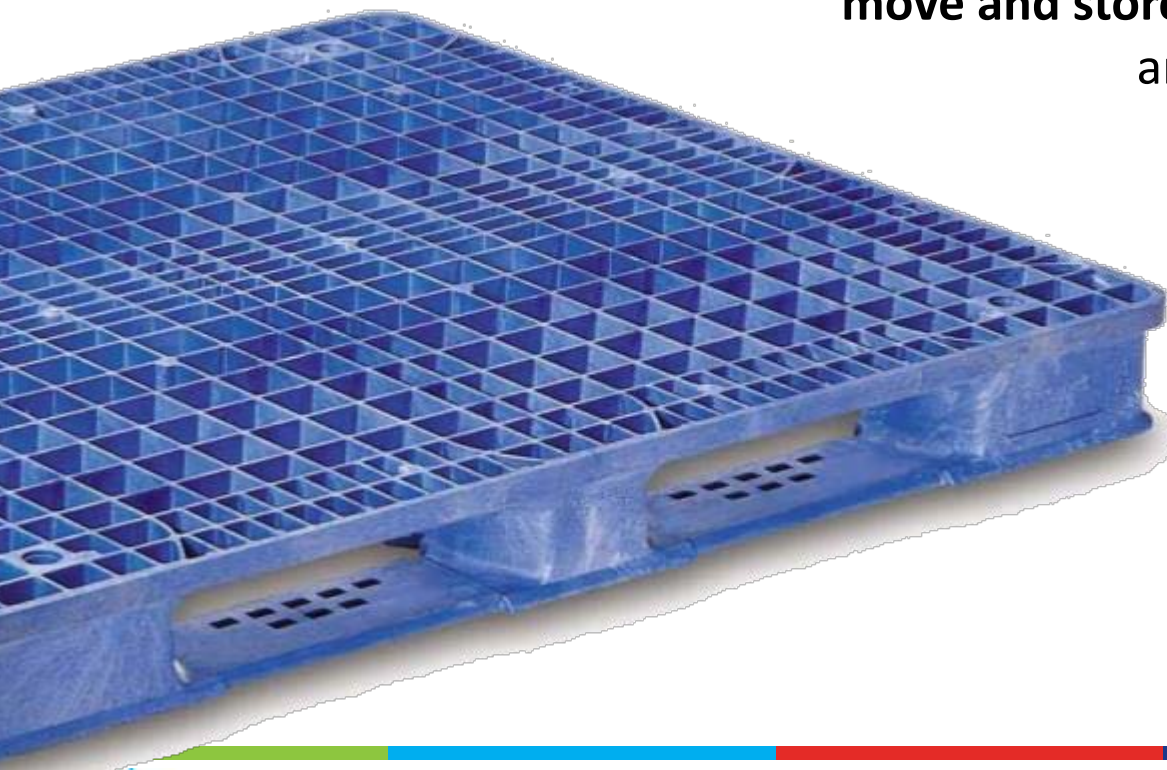
Column Load



Fluid Load

Pallet Design

Hygienic pallets are easily sanitized, non-porous platforms **designed to cleanly move and store food product within a facility** and support sanitary conditions.



- **Open deck, flow-through design for easy washing & drying**
- **Contoured surfaces & corners lowering risk of puncturing or snagging product**
- **No rust, nails, staples, or loose boards**
- **Does not absorb moisture or odor**
- **FDA compliant materials**

Material Types

High Density Polyethylene (HDPE)

- Performs well in stable and cold temperatures

Polypropylene (PP)

- Increased unsupported racking capacity compared to HDPE
- Performs well in stable and hot temperatures

Recycled

- Used when performance can be sacrificed for cost
- Cannot be FDA compliant (unless stream of FDA regrind is isolated)

Fire Retardant

- Allows a pallet to char and disintegrate with the same properties as wood
- Insurance/Safety organizations that provide safety approvals
 - Factory Mutual (FM)
 - Underwriters Laboratories (UL)
- Basic criteria needed for third-party approval
 - Manufacturing plant certification
 - Pallet design
 - Material certification

Material Additives

- FDA approved materials
- Metal vs. X-Ray Detection
- UV protection
- ESD protection
- Colors



Summary

- FSMA impacts the entire supply chain
- Understand different racking configurations and how it impacts safety and costs
- Plastic pallets offer ancillary benefits to wood
- Material additives can increase supply chain safety compliance

For More Information:

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