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RPC Labeling Standards

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Regulation	Compliance Date	Impact on Reusable Packaging
FSMA – Produce Safety Rule	Nov. 27 th , 2017	<ul style="list-style-type: none"> • Health and Hygiene training programs required for RPC SC's. • Packaging is now classified as “equipment,” and must not contaminate produce via inadequate sanitation.
FSMA – Accredited Third Party Certification (rule published Nov. 13 th , 2015)	May 31 st , 2017	<ul style="list-style-type: none"> • FDA will certify auditing schemes to act as extensions of the law. • Audits like AIB or SQF will become “preliminary FDA inspection,” and will be usable by the regulatory authority.
FSMA – Foreign Supplier Verification Programs Rule (FSVP)	May 31 st , 2017	<ul style="list-style-type: none"> • Importers responsible for assuming the risk of what they receive. • Packaging, labelling and sanitation of equipment now part of Hazard Analysis of all imported product.
Safe Foods for Canadians Act	January 1 st , 2015	<ul style="list-style-type: none"> • Consolidates all Food Regulation under the CFIA • CFIA uses CanadaGAP & other supplemental audit programs to enforce code.
CanadaGAP F&V, GH Section 17.2 – Packaging Materials	January 1 st , 2015	<ul style="list-style-type: none"> • Reusable Packaging is directly addressed in the law. • Subsection 17.2 states RPC must be: Clean (e.g. free from stains, foreign objects, potential sources of contamination, etc.)
FSMA – Preventative Controls – Human / Animal Food	Sept. 17 th , 2016	<ul style="list-style-type: none"> • Health and Hygiene training programs required for RPC SC's. • Packaging is now classified as “equipment,” and must not contaminate produce via inadequate sanitation.

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After 2 hours...

After 6 hours...

Incompatible Labels

- Non-compliant labels have historically been the **#1 quality complaint** for RPC
- **17.4%** of all defects and **66%** of all rewash/rework are label related
- Eliminating incompatible labels will improve quality and efficiency of RPC immediately.

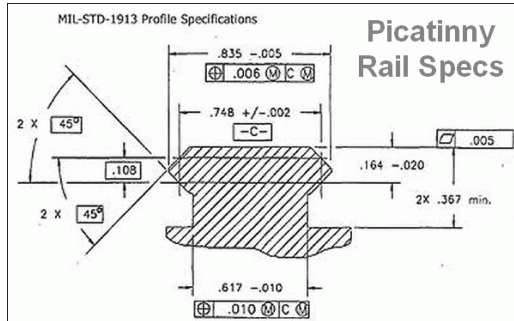


Label Variability

- 846 label manufacturers in the United States
- Thousands of label and adhesive combinations



Standards are Critical Tools of Innovation



- 1995 – Picatinny (Pic) Rail
 - Standardized accessory weapon mount
- Doubled standard issue weapon longevity / functionality
 - Increased ability for mission specific variability and/or specialization
 - 1.5 million active & 1.5 million reserve soldiers
 - 15 fold increase in accessory market

Standardization Yields Positive Results

BLACK & DECKER®

- 1970 – Operational Nightmare
 - 122 models, 30 motors, 60 housings, 104 armatures
- 1973 – Full Standardization
 - 1 housing, 1 motor, integrated armatures
- 85% less labor, 80% less production cost, 30% cheaper price & 50% higher margin
- 10% quality complaints to 1%



Label Solutions

Label Type	Current Usage	Unit Cost	Wash Result	Impact
Dissolvable	~ 5%	\$0.015	100% successfully removed in the wash machine w/o QC intervention	Excellent for dry supply chains
New Compliant Label	~21%	\$0.01	New compliant label designs are 80% - 90% removed in the wash machine w/o QC intervention	Excellent for wet supply chains
Old Compliant Label	~50%	\$0.015	Synthetic label w/ acrylic adhesive is significantly less successfully removed in wash machine, requires significant QC attention & removal	Not easily removable Not automation compatible
Non-Compliant Label	~23%	\$0.0075	Damages RPCs, very difficult to remove by hand	Legal enforcement actions Regulatory enforcement actions
Direct Ink printing	~ 1%	\$0.005	Edible/direct food contact ink is ink jet printed directly onto RPC. 100% successfully removed in the wash machine w/o QC intervention	Excellent for wet & dry supply chains High installation cost



Compliant Label Definition

1. Does not damage the RPC
2. Does not leave residue that can cause harborage
3. 90% wash off rate in the wash machine
4. Available for industry wide use at acceptable volume/price



RPA Label & Adhesive Specification Requirements

Universal Requirements

Adhesive Properties				Federal Regulation Approval		Typical Adhesion Values (lb/in ²)			
Adhesive Type	Minimum Application Temperature	Temperature Service Range	Coat Weight	Indirect Food Contact	Direct Food Contact	Stainless Steel	Glass	Polyethylene	Corrugated
Wash-Off Type	-20°F (-7°C)	-65°F to +160°F (-54°C to +71°C)	< 1.4 gm/m ²	Yes	No	180° Peel: <4.8 lb./in	180° Peel: <1.1 lb./in	180° Peel: <2.5 lb./in	180° Peel: <4.4 lb./in

Approved Label & Adhesive Combo RPA Label and Adhesive Specification Document

- *7 proven products*
- Wet, dry, or dual wet/dry solutions
- Proven successful throughout the supply chain with multiple commodities
- *All sold at or below current synthetic label avg. price*

RPA Label & Adhesive Specification Document

Product Name	Substrate Name	Adhesive Name	Minimum Application Temperature	Temperature Service Range	FDA 21 CFR 175.105 Compliant "Indirect"	FDA 21 CFR 175.125 (a)(b) Compliant "Direct"	Adhesive Coat Weight	Description
#54 RAFLACOAT RP45 (SP184W)	54# Raflacoat RP45 40# White Kraft Semi-Gloss Paper	RP45	-32°F (-4°C)	-40 to 200°F (-40°C to 93°C)	Yes	No	1.3 gm/m ²	Spec Provided
MACTAC DBH0101	Direct Thermal Film -3mil	LT-20	-32°F (-4°C)	-40 to 200°F (-40°C to 93°C)	Yes	No	.9-1.3 gm/m ² 0.0007 +/- 10%	Spec provided
MACTAC DTM0902	Direct Thermal Top Coated Paper - 3mil	LT-20	-32°F (-4°C)	-40°F to 200°F (-40°C to 93°C)	Yes	No	.9-1.3 gm/m ² 0.0007 +/- 10%	Spec provided
3M FP0602	Synthetic, 2.6 mil white BOPP	D2200	20°F (-7°C)	-40°F to 180°F (-40°C to 82°C)	Yes	No	1.3 gm/m ²	Spec provided
MACTAC WDP3201	Dissolvable Paper - 2.5 mil	MD-332	+25°F (-4°C)	-40°F to +175°F (-40°C to +80°C)	Yes	No	.9-1.0 gm/m ² 0.0040 +/- 10%	Spec Provided
DAYMARK IT115786	Dissolvable Paper 3.0 mil	Water Soluble Permanent IT115786	21°F (-6°C)	-40°F to 176°F (-40°C to 80°C)	Yes	No	1.4 gm/m ²	Spec provided
RICOH 140LDS	Direct Thermal Film 2.6 +/- 0.3 mil	Ricoh G29	-40°F (-40°C)	-65°F to 131°F (-54°C to 55°C)	Yes	No	1.2 gm/m ²	Spec Provided

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Industry Support & Participation

- Retail support is critical
- RPC user support is growing quickly
- RPA will drive the standard and control development



MIDWEST POULTRY SERVICES, L.P.



CAJAS AGRICOLAS



Studies and Investigations

Study	Commissioned by:	Summary Description
Assessment of General RPC Cleanliness as Delivered for Use in Packaging and Distribution of Fresh Produce	Suslow & International Paper	<ul style="list-style-type: none"> • Suggests an unreasonably high levels of bacteria on RPC's • Claims the cleaning and sanitization process of RPC depot that is falling short • Recommends strict testing program of all RPC inbound products
Attachment of Salmonella and other Foodborne Pathogens to Reusable Plastic Containers	Ricke & International Paper	<ul style="list-style-type: none"> • Created biofilm generation on RPC plastic under ideal laboratory conditions • Claims biofilms easily adhere to RPCs being used in commercial settings • Suggests it is not possible to commercially remove biofilms with current cleaning methods and chemicals
Pathogen Destruction during Manufacturing of Corrugate	Sanders & Corrugated Packaging Alliance	<ul style="list-style-type: none"> • Claims corrugate manufacturing process destroys pathogens • Suggests RPC is not safe and risks foodborne illness • States studies have shown "high levels of pathogens on reusable containers"
Contribution of Two Different Packaging Material to Microbial Contamination of Peaches	Department of Agricultural & Food Sciences, University of Bologna	<ul style="list-style-type: none"> • Claims microbe transfer & cross-contamination higher on RPC • Suggests corrugate absorbs microbes/pathogens & prevents transfer to product • IFCO RPC was not used. Reusable field crates bought at Farmers Market used
APC & Pathogen Correlation on RPC's within the Fresh Food Supply Chain	RPA	<ul style="list-style-type: none"> • Study to show the absence of any correlation between APC & Pathogen numbers • Educate market on the natural expectation of reasonable APC results with no expected pathogen/food safety risk • August/September test date. October release (PMA)

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Q&A