

LMSSC PACKAGING STANDARD

Revision: 0.0

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STANDARD PACKAGING MATERIAL LIST FOR LMSSC SHIPPING FACILITIES

1.0 SCOPE

- 1.1 This packaging standard identifies the commercial materials that may be called out on packaging designs and instructions at LMSSC Shipping Facilities. This standard is for LMSSC internal use only.

2.0 REFERENCES

- 2.1 LMSSC Manufacturing Process Instruction MPI-931051-010, Packaging, Handling, Storage and Transportation (PHST)
- 2.2 LMSSC Manufacturing Process Instruction MPI-931051-020, Packaging and Handling of Contamination-Controlled Hardware
- 2.3 LMSSC Manufacturing Process Instruction MPI-441008, Protection of Electrostatic Sensitive Discharge Sensitive (ESDS) Devices
- 2.4 LMSSC Command Media, N2.3-T1-ProdProt-1.0-S1, Packaging, Handling, Storage and Transportation (PHST) Standard
- 2.5 LMSSC Command Media, N2.3-T1-ProdProt-1.0-G1, Packaging, Handling, Storage and Transportation (PHST) Guidebook

3.0 GENERAL REQUIREMENTS

- 3.1 Packaging material restrictions are identified in command media N2.3-T1-ProdProt-1.0-S1 and -G1, as well as Manufacturing Process Instruction MPI-931051-010.
- 3.2 Contracts should be reviewed for Military and NASA packaging restrictions. Contact Product Protection if you are unable to access the Electronic Contracting Environment Database. Material manufacturers may be required to provide a Certificate of Conformance (CoC) if Military or NASA packaging standards are invoked by contract. Military and NASA packaging is typically invoked by MIL-STD-2073 and NPR6000.1. The FBM Program invokes a hybrid of military packaging through OS8244. In these cases, commercial materials will have to be separated from materials bought to a CoC.
- 3.3 Packaging materials for the primary preservation of ESD and contamination sensitive items (visibly clean and precision clean) are not listed in this standard. These preservation methods are usually performed prior to the items arrival in a Shipping Facility and require materials that were bought to the restrictions imposed by the PMP Database Code (this includes specific suppliers). Refer to MPI-441008 and MPI-931051-020.
- 3.4 Materials used to package hazardous materials are not listed in this standard.

4.0 DETAILED PACKAGING INSTRUCTIONS

- 4.1 Packaging materials approved by this standard are listed in Table I.
- 4.2 Shipping Facilities may carry an inventory of additional materials based on the programs they support and the types of products they package.

TABLE I – STANDARD PACKAGING MATERIALS FOR SHIPPING FACILITIES

Env. Friendly	Description	Reference Specification	PMP Database Code
	WRAPPING MATERIALS		
--	Plastic Sheet, Polyolefin	A-A-3174, Type I, Class 1, Grade A	LM-YC10700 Series
X	Wrapping Paper, Chemically Neutral (Non-Corrosive), Flat (Kraft)	MIL-DTL-17667, Type I	LM-YC10571A or B
--	Plastic Film, Cushioning, Flexible, Cellular (Regular Non-Anti-Static Bubble Wrap)	PPP-C-795, Class 1, Thin to Thick (1/4" to 1/2" Thick)	--
--	Sheet, Closed Cell Polypropylene Foam	A-A-59135, Class 1 or 2, Grade A (White), 1/8" to 1/4" Thick)	--
X	Kraft Paper, 3-Ply Flexible (requires leasing a Ran Pak, Paper Plus or similar converter). <u>Note:</u> this is a good substitute for loose fill peanuts.	A-A-59311	--
	WATERVAPOR BARRIER MATERIALS		
--	Barrier Materials, Watervaporproof, Greaseproof, Flexible, Heat-Sealable	MIL-PRF-131, Class 1	LM-YC10685A
--	Barrier Material, Transparent, Flexible, Heat-Sealable	MIL-PRF-22191, Type I, Class 1	LM-YC10693A
--	Barrier Materials, Flexible, Electrostatic Protective, Heat-Sealable	MIL-PRF-81705, Type I, Class 1	LM-YB10707A
	DESICCANT AND HUMIDITY INDICATORS		
--	Desiccants, Activated, Non-Dusting, Bagged, Packaging Use and Static Dehumidification	MIL-D-3464, Type II	LM-YC10748A
--	Indicator, Humidity, Card, Three Spot, Impregnated Areas (Cobaltous Chloride)	MS20003	MS20003-2
	CUSHIONING MATERIALS		
X	Cushioning Material, Cellulosic Packaging <u>Note:</u> this is a good substitute for loose fill peanuts.	A-A-1898, Grade I, Optional Class, Size and Style	--
--	Cushioning Material, Packaging, Closed Cell Foam Plank, Polyethylene, Density: 2.0 pcf, 1" and 2" thick sheets. Also known as Ethafoam or T-Lam.	A-A-59136, Class 1, Grade A (White), Type I	--
--	Polyurethane Foam, Rigid or Flexible, for Packaging, Polyurethane Ether or Ester, Density: 2.0pcf, 1" and 2" thick sheets	MIL-PRF-26514, Type I, Class 2, Grade B or C	--
X	Earth Cell 1450, Manufactured from Bio-based Polyols (i.e. Soy), 1" and 2" thick sheets	Commercial Source: American Excelsior Company	--
	CORRUGATED FIBERBOARD CONTAINERS		
X	Domestic Corrugated Fiberboard Boxes, Single Wall	ASTM D5118, Type:	

		CF, Class: Domestic, Variety: Single Wall, Style: RSC, Grade: 44 ECT or 250 Burst, Size: Optional, Color: Optional	--
X	Domestic Corrugated Fiberboard Boxes, Double Wall	ASTM D5118, Type: CF, Class: Domestic, Variety: Double Wall, Style: RSC, Grade: 61 ECT or 350 Burst, Size: Optional, Color: Optional	--
X	Weather Resistant Corrugated Fiberboard Boxes, Single Wall	ASTM D5118, Type: CF, Class: Weather Resistant, Variety: Single Wall, Style: RSC, Grade: V or W grades per ASTM D5118 Table 3, Size: Optional, Color: Optional	--
X	Weather Resistant Corrugated Fiberboard Boxes, Double Wall	ASTM D5118, Type: CF, Class: Domestic, Variety: Double Wall, Style: RSC, Grade: V or W grades per ASTM D5118 Table 3, Size: Optional, Color: Optional	--
	TAPING MATERIALS		
--	Pressure-Sensitive Tape for Packaging, Box Closure and Sealing, Waterproof, Weather-Resistant, Polyester Backed, 2" and 3" widths	ASTM D5486, Type I, Class 2, Source: 3M #351, #355 or similar	--
--	Pressure-Sensitive Tape for Packaging, Box Closure and Sealing, Water-Resistant, Polyester Backed, 2" and 3" widths	ASTM D5486, Type II, Class 2, Source: 3M #355 or similar	--
--	Pressure-Sensitive Tape for Packaging, Box Closure and Sealing, Water-Resistant, Polypropylene, 2" and 3" widths	ASTM D5486, Type III, Source: 3M #375 or similar	--
--	Pressure-Sensitive Tape for Packaging, Box Closure and Sealing, Water-Resistant Woven Cloth Backed, 2" and 3" widths, Color: Olive Drab	ASTM D5486, Type IV, Source: Polyken #231 or similar	--
--	Reinforced Gummed Tape for Sealing and Securing, 3" width	ASTM D5749, Type I, Class 2, Source: Shurtape WP400 or similar	--
	STRAPPING MATERIALS		
--	Strapping, Flat Steel, Heavy Duty, 3/4" wide x 0.031" thick	ASTM D3953, Type 1, Heavy Duty, Finish A	--
--	Strapping Seals, Snap on or Open, for 3/4" wide x 0.031" thick Heavy Duty Strapping	ASTM D3953, Class H, Finish B, Grade 3,	--

		Style 1	
--	Strapping, Flat Steel, Heavy Duty, 1 1/4" wide x 0.031" thick	ASTM D3953, Type 1, Heavy Duty, Finish A	--
--	Strapping Seals, Snap on or Open, for 1 1/4" wide x 0.031" thick Heavy Duty Strapping	ASTM D3953, Class H, Finish B, Grade 3, Style 1	--
--	Strapping, Polypropylene, 1/2" wide x 0.030"	ASTM D3950, Type II, 810 lb Breaking Strength	--
--	Seals for Polypropylene Strapping, Open Style, for 1/2" wide x 0.030"	ASTM D3950, Galvanized Steel	--

6.0 QUALITY ASSURANCE

6.1 This section is not applicable.

REVISION HISTORY

Release Date	Rev	Change Description	Responsible Engineer
04-07-2014	0.0	Original Release	Bill Manning

APPROVALS

Approvers	Disciplines	Date: MM-DD-YYYY
Tom Shanley	PHST (Denver - Lead)	04-07-2014
Rick Dumlao	PHST (SV-Lead)	04-07-2014
John Machann	Shipping Manager (Denver)	04-07-2014
Scott Givens	Shipping (SV-Lead)	04-07-2014
Pat O'Donnell	Transportation Manager (SV)	04-07-2014
Marcus Ruddy	Process Engineering Manager	04-07-2014