

SPECIFICATION

A.T.A. (Airline Transport Association)

1. SCOPE

1.1 Scope. This specification covers, weather resistant, transit and storage, reusable containers. Containers are constructed of fiberglass and wood laminations and other ferrous and non ferrous materials as herein specified. The containers described herein shall serve the function of transit storage and protection of materiel which dictate the ongoing need of reusable cases and containers to maintain operability of shipped and transported items. In all instances, the degree of dunnage integrity shall be considered and will directly and indirectly influence design parameters as to internal cushioning and outer case shell construction materials used.

2. CONSTRUCTION

2.1 Panel Construction. Panels shall be constructed of a minimum of .040" stucco (embossed) finish fiberglass (glass-fiber reinforced polyester) laminated to cross-ply, multi-layer 1/4", 3/8" or 1/2" ACX grade plywood in accordance with APA Group I, per PS1-83 and FED-SPEC. NN-P-530-E. Finished panel to be a minimum of 8 (eight) mm thick.

2.2 Extrusions. All panels shall be joined with aluminum extrusions. All panel joining extrusions shall utilize a unique inner/outer-double wall construction into which the panels shall be bonded with 3M #3792 Jet-Melt Adhesive, and then stitched with pneumatically driven, double incisor, steel fasteners from the inside of the container at a minimum of 6" intervals for additional strength. The extrusion shall be 6063 aluminum alloy with a temper of T52 that complies with FED-SPEC. QQ-A-200/9 and has a mill finish (clear anodized finish on 1/2" construction and 1/4" constructions Ultra Star and Super Star cases). Both inner and outer wall shall be at least .060" in thickness. Inner and outer wall must be joined together with a common aluminum wall creating a one piece corner extrusion.

The perimeter of the lid shall mate with the perimeter of the body by means of a tongue and groove valance extrusion which shall be 6063 aluminum alloy with a temper of T52 and comply with FED-SPEC. QQ-A-200/9. The length of the tongue protrusion shall be at least .150" long and the depth of the groove shall be at least .150" deep. Tongue and groove valance extrusions shall be of one continuous piece with corners formed by notching of the inner leg and bending of

outer leg. Stray fragments of aluminum produced in the notching of these corner joinings shall be cause for rejection of any container manufactured under this specification.

The extrusion shall be secured to panel by bonding with 3M #3792 Jet-Melt adhesive. In addition, the tongue and groove valance extrusion shall be further secured by means of zinc plated cold rolled steel tongue and groove valance reinforcement clamps. One reinforcement clamp shall be required in each of the tongue and groove corners for a total of 8 (eight) reinforcement clamps per case. Each reinforcement clamp shall utilize a minimum of 2 blind rivets which penetrate the tongue and groove extrusion.

2.3 FOAM - Polyfoam used as an interior cushioning agent shall conform to the procedures of tests A, B, D, E, and F of ANSI/ASTM Designation D3574-86 testing standards. All values in the following listing are shown in British Units.

- Apparent density shall be 1.8 to 2.0 lb/ft cubed.
- Indentation force deflection square @ 25% deflection shall be a minimum of 35 and a maximum of 45.
- Tensile strength shall be a minimum of 18 psi, with an ultimate elongation of a minimum of 100%.
- Minimum tear strength shall not exceed 1.5 lbs./inch and compression set shall not exceed 10% after a minimum of 22 hours at 158° F(70 ° C.)
- Cell count shall fall within the 32± 4 pores per linear inch range.
- Polyester foam herein described must meet and successfully pass the FMVSS-302 combustibility test parameters.

3. HARDWARE

3.1 CORNERS - Ball corners shall be of heavy steel construction with a minimum of .060 thickness and shall be zinc plated. 8 (eight) corners per case shall be fastened by a minimum of 3 blind rivets per corner. Those rivets shall penetrate only the wood panels and shall be reinforced with steel backing when only panel is penetrated.

3.2 LATCHES - latch assemblies shall be of steel construction, recess type, spring or non-spring loaded, zinc plated. The latch assemblies shall be attached to the

container with blind rivets and shall be reinforced with steel backing when only panel is penetrated.

3.3 HINGE - In cases requiring a hinge it shall be a full length aluminum piano-type hinge, .040" thick with 5/8" legs and a minimum dimension to cover the entire surface height of the tongue and groove valance extrusion. The blind rivets used in securing the hinge shall penetrate the tongue and groove valance extrusion as well as the panels of the case. Rivets shall be spaced no more than 4" (four inches) apart.

3.4 TONGUE & GROOVE REINFORCEMENT (CLAMP)

This right angle reinforcement piece shall be a minimum of .047" thick, cold-rolled steel, zinc plated. These reinforcement pieces shall be secured as described in SECTION 2.2.

3.5 HANDLES - Handle assemblies shall be of heavy steel construction, recessed dish type, 1/2" rubber grip handles spring retractable (loaded to return to the recessed dish when released). The entire steel assembly will be zinc plated. The handle assemblies shall be attached to the container with aluminum blind rivets backed with steel reinforcements.

4. OPTIONAL EQUIPMENT

4.1 CASTERS - Casters of appropriate diameter and support strength shall be equipped with ball bearing swivel and sleeve bearing wheel with rubber tread and molded core. Weight capacity shall meet or exceed 800 lbs. per set of four casters. Casters shall be outfitted on case, permanently attached to a 3/4" multi-layer, cross-ply caster board or as a separate "dolly" option. Casters shall be secured with 1/4-20 X 2" hex head cap screws with proof load of 74,000 psi and with 1/4" X 20 elastic stop nuts meeting MIL-SPEC.-25027 and exceeding MIL-SPEC.-P-17091. Bolts used must not be "machine ground off" after the installation of hex nuts as specified. Such a procedure would "strip" threads of the bolt in the machining process and the nuts in the removal process impeding field reparability of case/caster assembly. Additionally, removable casters are also available where removability of caster assemblies from case is dictated to save transit vehicle space. Attachment of removable caster mounting plate to case will be identical as caster mounting as previously described. Caster will slide into steel construction mount and be positively retained by means of a permanently secured, encapsulated, spring-loaded plunger retention device.

5. QUALITY ASSURANCE REQUIREMENTS

Each case shall be checked for the following characteristics:

5.1 Meets dimensional requirements

5.2 No loose or missing parts

5.3 Proper closure of case

5.4 No flaws or defects in panels and or aluminum extrusions

5.5 Hardware is operational and properly installed

5.6 Quality of workmanship

5.7 Correctly labeled and marked for shipment

5.8 Cases not meeting all of these criteria shall be re-worked when possible and sent back for re-inspection or rejection.

6. PACKAGING

All cases shall be packed individually in a minimum 275 lb. (two hundred seventy-five pound) test B flute wall corrugated container board carton to reduce likelihood of common-carrier transit damage or marring of new containers. Marking shall be in accordance with the instruction for each delivery order.

7. SPECIFICATIONS/TESTING

All ATA cases manufactured by STAR CASE meet or exceed Airline Transport Association, Specification 300, Category I testing parameters and comply with or exceed MIL-STD. 810 environmental test methods.

STAR CASE has tested sample containers to meet the requirements of the following specification and military environmental tests. Testing was performed at Gaynes Testing Laboratories in Chicago, Illinois. All materials are in accordance with the appropriate MIL-SPEC./MIL-STD., and the manufacturing techniques assure a quality product.

7.01 VIBRATION TEST, unsecured, MIL-STD 810C, method 514.2, Procedure IX

7.02 VIBRATION TEST, secured, MIL-STD 810C, method 514.2, Procedure X

7.03 BASIC DESIGN SHOCK TEST, MIL-STD 810C, method 516.2, Procedure I

7.04 TRANSIT DROP TEST, MIL-STD 810C, method 516.2, Procedure II

7.05 HIGH TEMPERATURE TEST, MIL-STD 810C, method 501.1, Procedure I

7.06 LOW TEMPERATURE TEST, MIL-STD 810C, method 502.1, Procedure I

7.07 TEMPERATURE SHOCK TEST, MIL-STD 810C, method 503.1, Procedure I

7.2 WATER SPRAY TEST, Per ASTM-Designation D951-51, and A.T.A. (Air Transport Association of America) Specification 300, Category 1.

7.3 TRANSIT DROP TEST, Per ASTM-Designation D-775, Objective A & B, and A.T.A. Specification 300, Category 1.

7.4 VIBRATION TEST, Per ASTM-Designation D-999, Procedure B, and A.T.A. Specification 300, Category 1.

7.5 COMPRESSION TEST, per STAR CASE Dictated Test Procedure, applying 20,000 lbs. of contact pressure to test sample.

7.6 Copy of independent test lab report available at time of bid.

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