

**SPECIFICATION
FOR
TRAYS, SERVICE, FIBER GLASS**

(THIS SPECIFICATION IS RELEASED FOR PROCUREMENT PURPOSES UNTIL REVISED OR RESCINDED.)

SCOPE

THIS SPECIFICATION COVERS RECTANGULAR SERVICE TRAYS MADE OF GLASS FIBERS BONDED IN POLYESTER RESIN. THE TRAYS ARE FOR USE IN THE SERVING OF FOOD.

I. CLASSIFICATION

THE TRAYS COVERED BY THIS SPECIFICATION SHALL BE CLASSIFIED AS FOLLOWS:

CLASS I - WITH NO WIRE IN THE EDGE OF THE TRAY.

CLASS II - WITH A REINFORCING WIRE IMBEDDED IN THE EDGE OF THE TRAY

| | <u>WIDTH</u> | <u>LENGTH</u> | <u>SIDEWALL & INSIDE DEPTH</u> | <u>BOTTOM THICKNESS</u> |
|-------|--------------|---------------|--|-------------------------|
| SIDE: | 14" | 18" | 5/8" | 0.100" |

A TOLERANCE OF PLUS OR MINUS 1/8" IN LENGTH AND WIDTH, PLUS 1/8" OR MINUS 1/16" IN INSIDE DEPTH, AND PLUS OR MINUS 0.010" IN SIDEWALL AND BOTTOM THICKNESS IS ALLOWED.

II. APPLICABLE STANDARDS

THIS SECTION IS NOT APPLICABLE.

III. REQUIREMENTS

A. MATERIALS

ALL MATERIALS SHALL BE NSF AND FDA APPROVED, OF FIRST QUALITY, 100% NEW AND SUITABLE FOR THE INTENDED USE.

1. GLASS FIBERS

THE GLASS FIBERS SHALL BE OF THE SAME TYPES AND USED IN THE SAME PROPORTIONS AS NORMALLY USED BY THE MANUFACTURER FOR FABRICATING HIS FIRST QUALITY TRAYS.

2. BONDING MATERIAL

THE MATERIAL USED FOR BONDING THE GLASS FIBERS SHALL BE A DETERGENT RESISTANT ISOTHALIC POLYESTER MATERIAL THERMOSETTING, OF THE TYPE AND IN THE PROPORTION NORMALLY USED BY THE MANUFACTURER FOR FABRICATING HIS FIRST QUALITY TRAYS. THE COMBINED WEIGHT OF THE FILLING MATERIAL AND PIGMENT SHALL AMOUNT TO NOT MORE THAN 5.0% OF THE TOTAL WEIGHT OF THE POLYESTER RESIN USED IN THE TRAY. TRAYS SHALL CONTAIN NO LOADING FILLERS.

IT IS NOT THE INTENT OF THIS SPECIFICATION TO ELIMINATE THE USE OF SUCH MATERIALS AS DECORATIVE MATS, POLYETHYLENE TERAPHTHALATE FIBERS, COLORED OR WITH METAL FOILS, OR OTHER ORGANIC PLASTIC, FIBER GLASS OR METAL FOIL DECORATING MATERIALS THAT ARE USED IN FIRST QUALITY TRAYS PRINCIPALLY TO IMPART AN AESTHETIC QUALITY TO THE TRAY. THESE MATERIALS SHALL CAUSE NO UNSIGHTLY WICKING ACTION.

3. REINFORCING WIRE

THE REINFORCING WIRE FOR CLASS II TRAYS SHALL BE A SINGLE CONTINUOUS FILAMENT 0.170 PLUS/MINUS 0.015" IN DIAMETER OR 9 GAUGE WIRE (.148" + 0.015") AND SHALL BE MADE OF SOLID ALUMINUM OR OF STEEL THAT HAS BEEN SUFFICIENTLY PLATED TO PREVENT RUST AND CORROSION.

B. WORKMANSHIP

ALL WORKMANSHIP SHALL BE FIRST CLASS IN EVERY RESPECT. THE TRAYS SHALL BE FABRICATED IN ACCORDANCE WITH THE BEST MANUFACTURING STANDARDS.

C. DESIGN

THE DESIGN OF THE TRAYS SHALL BE THE MANUFACTURERS' STANDARD DESIGN FOR RECTANGULAR SERVICE TRAYS.

D. CONSTRUCTION

THE MATERIALS THAT MAKE UP THE TRAY SHALL BE MOLDED UNDER HEAT AND PRESSURE INTO ONE SOLID PIECE IN A MANNER THAT WILL PREVENT THE MATERIALS FROM BECOMING UNBONDED OR FROM SEPARATING FROM ADJACENT MATERIALS WITHIN THE FINISHED TRAY. THE TRAYS SHALL BE NSF APPROVED, RECTANGULAR IN SHAPE, HAVE FLAT BOTTOMS AND SHALL HAVE SIDES TAPERED AT UNIFORM ANGLES TO PERMIT STACKING AND NESTING. THE TRAYS SHALL HAVE STACKING LUGS, LOCATED ON THE OUTSIDE OF THE SIDEWALLS, THAT WILL FACILITATE EFFECTIVE VENTILATION BETWEEN THE TRAYS WHEN THEY ARE STACKED. WHEN THE TRAYS ARE STACKED, NONE OF THE LOWER SURFACE OF THE TOP TRAY, EXCEPT THE STACKING LUGS, SHALL REST ON OR COME IN CONTACT WITH THE UPPER SURFACE OF THE TRAY DIRECTLY UNDER IT.

1. COLOR

THE TRAYS SHALL BE FURNISHED IN THE MANUFACTURERS' STANDARD COLORS. THE COLOR SHALL BE A QUALITY THAT IS EXHIBITED BY A PERMANENT PART OF THE TRAY MATERIAL AND SHALL NOT BE IMPARTED BY APPLYING ON THE OUTER SURFACE OF THE TRAY A COATING OR LAYER OF COLORED MATERIAL THAT MIGHT WEAR, PEEL, CRACK, CHIP OR DETERIORATE IN SOME MANNER. COLORS SHALL NOT BLEED AND SHALL NOT FADE OR DETERIORATE EXCESSIVELY. TRAYS REPRESENTED AS BEING ALIKE SHALL NOT VARY WIDELY IN COLOR.

2. SURFACE

THE SURFACES OF THE TRAYS, INCLUDING THE LIPS OF THE SIDEWALLS, SHALL HAVE A UNIFORMLY HIGH LUSTER THROUGHOUT PRODUCED BY MOLDING TECHNIQUES OR BURNISHING OR OTHERWISE TREATING THE BASE MATERIAL AND NOT BY THE APPLICATION OF A FINISH OR COATING OF LACQUER, VARNISH, ET CETERA. THE FINISHED TRAYS SHALL BE FREE OF FLASH, IMPERFECTIONS, SHARP EDGES OR IRREGULARITIES, CHECKS, CRACKS, CHIPPED PLACES, BLISTERS, DIMPLES,

PINHOLES AND OTHER DEFECTS WHICH MAY AFFECT THEIR APPEARANCE AND SERVICEABILITY. AFTER REMOVAL OF FLASH, TRAYS SHALL BE BURNISHED. NO GLASS FIBERS OR DECORATIVE MATERIALS SHALL PROTRUDE THROUGH THE OUTER SURFACE OF THE TRAY. ANY GLASS FIBERS ADHERING TO THE OUTER SURFACE SHALL BE WASHED FROM OR OTHERWISE REMOVED FROM THE TRAYS BEFORE THEY ARE PACKED TO BE SHIPPED. THE FINISHED TRAY AS DELIVERED SHALL HAVE AN OUTSIDE SURFACE THAT WILL RESIST CRACKING OR CRAZING AND WILL BE ABRASION RESISTANT, OVER A LONG PERIOD OF SATISFACTORY SERVICE LIFE, TO MATERIALS ENCOUNTERED IN NORMAL USE THAT MIGHT CAUSE SCRATCHING OR OTHER SURFACE MARRING.

IV. WARRANTY

THE CONTRACTOR WARRANTS TO THE OWNER THAT ALL SERVICE TRAYS FURNISHED UNDER THIS SPECIFICATION WILL BE NEW, OF GOOD MATERIAL AND WORKMANSHIP AND AGREES TO REPLACE PROMPTLY ANY PART OR PARTS WHICH BY REASON OF DEFECTIVE MATERIAL OR WORKMANSHIP SHALL FAIL UNDER NORMAL USE, FREE OF NEGLIGENCE OR ACCIDENT, FOR A MINIMUM PERIOD OF 12 MONTHS FROM DATE PUT IN OPERATION. SUCH REPLACEMENT SHALL BE FREE OF ANY CHARGE TO THE OWNER OR HIS REPRESENTATIVE.

V. SERVICE, PARTS, AND MANUALS

THIS SECTION IS NOT APPLICABLE.

VI. ACCEPTANCE EVALUATION AND QUALITY ASSURANCE

A. CONTRACTOR INSPECTION AND TESTING

THE CONTRACTOR IS RESPONSIBLE FOR THE PERFORMANCE OF ALL INSPECTION AND TEST REQUIREMENTS IN ORDER TO DETERMINE THAT THE TRAYS OFFERED MEET THE REQUIREMENTS OF THIS SPECIFICATION PRIOR TO OFFERING THE TRAYS FOR STATE INSPECTION AND ACCEPTANCE.

1. CERTIFICATION

PROPOSALS SUBMITTED IN RESPONSE TO THE REQUIREMENTS OF THIS SPECIFICATION SHALL BE ACCOMPANIED BY A CERTIFIED STATEMENT INDICATING THAT REPRESENTATIVE SAMPLES OF THE TRAYS OFFERED HAVE PASSED THE TEST PROVISIONS THAT ARE LISTED IN SECTION VI.D. (TEST PROCEDURE) AND HAVE ALSO PASSED ALL INSPECTION THAT IS NECESSARY TO DETERMINE THE TRAYS OFFERED MEET THE REQUIREMENTS OF THIS SPECIFICATION.

B. SAMPLING FOR LOT ACCEPTANCE (AT POINT OF DELIVERY)

1. INSPECTION LOT

FOR THE PURPOSE OF SAMPLING A LOT SHALL CONSIST OF ALL TRAYS OF THE SAME TYPE DELIVERED TO FILL A SINGLE ORDER.

2. SAMPLE SIZE

AFTER THE TRAYS HAVE BEEN RECEIVED, AN AUTHORIZED REPRESENTATIVE OF EITHER THE INSTITUTION PURCHASING THE TRAYS OR OF THE PURCHASE AND CONTRACT DIVISION, SHALL PICK AT RANDOM TWO TRAYS FROM A LOT OF 100 TRAYS OR LESS, AND THREE TRAYS FROM A LOT OF MORE THAN 100 FOR INSPECTING AND TESTING BY THE STATE TO DETERMINE ACCEPTABILITY.

C. LOT ACCEPTANCE

THE SAMPLE SELECTED BY THE STATE SHALL BE SUBJECTED TO TESTS SPECIFIED. IF THE SAMPLE FAILS IN ONE OR MORE OF THESE TESTS, THE LOT SHALL BE REJECTED.

D. TEST PROCEDURE

1. RESISTANCE TO BREAKAGE

THREE TRAYS AS THEY WILL BE FURNISHED, AND THREE TRAYS THAT HAVE BEEN IMMERSSED IN A BOILING 2% SOLUTION OF SODIUM CARBONATE FOR ONE HOUR AND IN BOILING WATER FOR AN HOUR (SEE TEST D.5., RESISTANCE TO BOILING WATER, FOR THE THREE TRAYS THAT SHALL BE USED IN THIS TEST) SHALL BE DROPPED ONCE ON EACH CORNER FROM A HEIGHT OF 48" FOR CLASS I TRAYS AND 42" FR CLASS II TRAYS, TO A CONCRETE SURFACE. BEFORE EACH DROP, THE TRAY SHALL BE HELD IN SUCH A MANNER THAT THE UPPER CORNER IS DIAGONAL TO AND VERTICALLY ABOVE THE LOWER CORNER. BEFORE DROPPING, THE LOWER CORNER SHALL BE 48" ABOVE THE CONCRETE SURFACE FOR CLASS I TRAYS AND 42" FOR CLASS II TRAYS. AFTER EACH DROP, THE TRAY SHALL BE EXAMINED FOR CRACKS EXTENDING COMPLETELY THROUGH THE TRAY AND PIECES BROKEN FROM THE TRAY. PIECES SHALL NOT SEPARATE FROM THE CORNERS OF THE TRAY, NOR SHALL ANY CRACKS EXTENDING COMPLETELY THROUGH THE THICKNESS OF THE TRAY RESULT. MINOR CHIPPING, SURFACE CRACKS, MINOR WARPING OF THE CORNER OR FLATTENING OF THE CORNER AT THE POINT OF IMPACT WILL BE PERMISSABLE.

2. WARPAGE (BOTTOM)

BOTTOM WARPAGE OF THE TRAY AS RECEIVED SHALL BE DETERMINED BY PLACING THE TRAY UPRIGHT (POSITION OF NORMAL USE) ON A FLAT SURFACE. IN THIS POSITION, THE TRAY SHALL BE SUFFICIENTLY PLANE SO THAT A "FEELER" GAUGE OF 0.0625" THICKNESS CANNOT BE INSERTED AT ANY POINT BETWEEN THE TRAY AND THE FLAT SURFACE.

3. WARPAGE (RIM)

RIM WARPAGE OF THE TRAYS AS RECEIVED SHALL BE DETERMINED BY PLACING THE TRAY AS RECEIVED UPSIDE DOWN ON A FLAT SURFACE AND HOLDING IT FIRMLY IN PLACE BY EXERTING PRESSURE WITH A 5-POUND WEIGHT AT THE CENTER OF THE TRAY. IN THIS POSITION, THE TRAY SHALL BE SUFFICIENTLY PLANE SO THAT A "FEELER" GAUGE OF 0.0625" THICKNESS CANNOT BE INSERTED AT ANY POINT BETWEEN THE RIM AND THE FLAT SURFACE.

4. RESISTANCE TO STAINING

BEFORE TESTING THE TRAY FOR RESISTANCE TO STAINING, THE TRAY SHALL BE THOROUGHLY WASHED IN HOT WATER USING EITHER A COMMERCIAL TYPE DISHWASHING COMPOUND OR A HOUSEHOLD TYPE LAUNDRY DETERGENT, RINSED WITH CLEAR WATER AND ALLOWED TO DRY. THE WATER IN WHICH THE TRAY IS WASHED SHALL HAVE A TEMPERATURE 150 DEGREES F. PLUS 10 DEGREES F. AFTER THE TRAY IS DRY, ONE POOL OF COFFEE AND ONE POOL OF TEA, AS NORMALLY PREPARED, ONE POOL OF TOMATO CATSUP AND ONE POOL OF BROWN VINEGAR SHALL BE MADE ON THE TOP SURFACE OF THE TRAY. EACH OF THE THREE POOLS OF LIQUID SHALL CONSIST OF APPROXIMATELY 15 DROPS. APPROXIMATELY ONE TEASPOONFUL OF CATSUP SHALL BE USED. THE POOLS SHALL BE PLACED FAR ENOUGH APART TO PREVENT MIXING AND EACH SHALL BE COVERED WITH A WATCH GLASS. THE MATERIAL SHALL REMAIN ON THE SURFACE OF THE TRAY AT ROOM TEMPERATURE UNDISTURBED FOR 20 PLUS/MINUS 2 HOURS. THE LIQUIDS SHALL THEN BE ABSORBED BY MEANS OF BLOTTING PAPER AND THE CATSUP REMOVED WITH A SOFT CLOTH. THE SURFACE SHALL BE WIPED DRY AND EXAMINED FOR STAINS AND CHANGES IN FINISH. THE SURFACE OF THE TRAY SHALL NOT BE STAINED OR SHOW ANY CHANGE IN FINISH.

5. RESISTANCE TO ALKALIES AND BOILING WATER

PUT THREE TEST TRAYS IN BOILING WATER FOR FIVE HOURS SO THAT HALF THE TRAY IS IMMERSSED. REMOVE AND WIPE TRAYS DRY. AFTER ALLOWING TRAYS TO TO COOL TO ROOM TEMPERATURE, ON INSPECTION THE TRAYS SHALL SHOW NO DELAMINATION, CHALKING, WARPAGE OR OTHER DEFECTS THAT AFFECT SERVICEABILITY.

THE THREE TRAYS SHALL THEN BE IMMERSSED IN A BOILING 2% SODIUM CARBONATE SOLUTION FOR ONE HOUR. THE TRAYS SHALL BE RINSED IN COLD WATER, WIPED DRY AND EXAMINED. THE TRAYS SHALL SHOW NO CRACKING OR CHANGES IN SURFACE APPEARANCE OR CHANGES IN COLOR.

THE TRAYS SHALL THEN BE IMMERSSED IN A VESSEL OF BOILING WATER FOR ONE HOUR IN SUCH MANNER THAT THE SURFACE OF THE TRAYS SHALL NOT CONTACT THE SIDES OF THE VESSEL. AFTER THE TRAYS HAVE REMAINED IN THE BOILING WATER FOR ONE HOUR, THEY SHALL BE REMOVED FROM THE WATER, WIPED DRY, AND ALLOWED TO COOL NORMALLY TO ROOM TEMPERATURE. THE TRAYS SHALL SHOW NO DELAMINATION, CRACKING, CHALKING, COLOR CHANGE OR OTHER DEFECTS THAT AFFECT APPEARANCE OR SERVICEABILITY. EACH TRAY SHALL THEN BE PLACED UPRIGHT (IN THE POSITION OF NORMAL USE) ON A TABLE THAT HAS A FLAT TOP SURFACE MADE OF SMOOTH PLASTIC-LAMINATE. THE BOTTOM OF EACH TRAY SHALL BE SUFFICIENTLY FLAT THAT THE TRAY WOULD NOT HAVE A TENDENCY TO TURN OR ROCK WHEN AN ATTEMPT IS MADE TO CUT FOOD ON OR TO TAKE FOOD FROM A CONTAINER, SUCH AS A DINNER PLATE, THAT IS RESTING ON THE TRAY.

AFTER THIS TEST, THE THREE TRAYS SHALL BE SAVED AND USED IN TEST PROCEDURE VI.D.1. (RESISTANCE TO BREAKAGE).

VII. DELIVERY AND PAYMENT

DELIVERY OF AND PAYMENT FOR SERVICE TRAYS UNDER THIS SPECIFICATION SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS STATED IN THE INVITATION FOR BIDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PACKING, PACKAGING, OR PROTECTION REQUIRED TO INSURE DELIVERY IN AN UNDAMAGED CONDITION.

VIII. ORDERING DATA

PURCHASERS SHOULD EXERCISE ANY DESIRED OPTION OFFERED HEREIN AND SHOULD SPECIFY THE FOLLOWING IN THE REQUISITION AND INVITATION FOR BIDS:

1. TITLE, NUMBER, AND DATE OF THIS SPECIFICATION