

**MILWAUKEE PUBLIC MUSEUM
CONSERVATION SECTION**

EXHIBITION GUIDELINES FOR OUTGOING LOANS

GENERAL

1. All objects must be exhibited in securely closed cases. Special security devices, including locks and alarms, may be required. Exceptions must receive specific written approval.
2. Objects may be handled only by persons experienced in handling and installing museum objects. Clean gloves must be worn when handling objects. If a glove material other than cotton or nylon knit is required, this will be designated on the Loan Agreement under *Special Conditions*.
3. Guards or museum staff members must be in attendance when an exhibit is open to the public.
4. Any questions regarding these guidelines should be directed to Claudia Jacobson, MPM Registrar, at (414) 278-2796 or jacobson@mpm.edu.

ENVIRONMENT

1. Temperature and relative humidity level should remain constant, within a range of 60-75 F and 40-55% relative humidity. Environmental conditions may be more (or less) stringent for specific types of objects.
2. No natural light is allowed in exhibit areas. All windows and skylights must be covered by shades or blinds.
3. Acceptable light levels are:
 - 5 footcandles (50 lux) for extremely sensitive organic materials:
dyed and undyed textiles; silk; wool; fur; paper; dyed leather; feathers; natural-dyed materials; lacquerware; tapa; baskets; reeds; grass
 - 15 footcandles (150 lux) for other organic materials:
bone; ivory; horn; wood; leather; rawhide; skin; furniture; paintings
 - unrestricted for inorganic materials:
metals; unpainted stone; unpainted ceramics; glass
4. It is preferred that light fixtures be located outside cases. If incandescent lamps are located inside cases, the cases must be properly ventilated to prevent heat build-up. Incandescent light fixtures must not be closer to an object than 3 feet and must not emit excessive heat on an object. Fluorescent light fixtures must not be closer to an object than 2 feet and must be filtered for ultraviolet radiation (UP3 or equivalent) or be ultraviolet-free. The maximum acceptable ultraviolet level on organic materials is 75 microwatts/lumen.
5. To prevent uneven fading, no portion of an object should be covered by another material or object.

CASE DESIGN AND CONSTRUCTION

1. All objects must be exhibited inside cases.
2. Objects may not be placed in contact with each other or touch the glass or Plexiglas of a vitrine; allow at least three inches between the object and the sides of the case. Objects with fiber or feather fringes, skirts, or other attachments should be at least six inches from the walls of a Plexiglas vitrine to prevent movement due to static.
3. Free-standing cases must be adequately weighted with sandbags or affixed to the floor to prevent vibration or rocking should the case be bumped or jostled.

4. Exhibit cases and props should be constructed of materials which are free of acids and emit the least amount of volatile chemicals.
 - Acceptable materials include polyethylene foam (Ethaf foam); polyethylene plastic sheeting; polyester sheeting (Mylar Type D); polyester fabrics (Dacron, Terylene); Plexiglas; acrylic adhesives and paints; sealed select woods; metals; glass; ceramics; undyed cotton or linen; acid-free paper and board
 - Unacceptable materials include wood pulp paper products; unsealed wood; wool; carpeting; sulphur dyes; vulcanized rubber; rubber derivatives; poly-sulphide adhesives; polyvinyl acetate emulsified resins; drying oil paints, oil-based paints; polyvinyl acetate latex based paints; lead-based paints; formaldehyde-containing products; polyurethane resins and foams; any polyvinyl chloride containing product.
 - Acceptable woods for case construction: poplar, maple, balsa, and birch. If plywood is used, the following are recommended in order of preference: marine plywood, exterior plywood with both or one side without knotholes, and exterior plywood.
 - Unacceptable woods for case construction: particle board/chip board, pressed-fiber board (Homosote), southern yellow pine, Douglas fir, cypress, redwood, red cedar, oak, hickory, pecan, butternut and sweet chestnut.
 - All exposed raw wood product surfaces used in cases must be sealed to reduce the off-gassing of harmful vapors.
 - Acceptable sealants: latex urethane acrylic (Benjamin Moore #416); acrylic paints (2-3 coats); shellac (2-3 coats); moisture-cured urethanes (non-oil modified); two part epoxy paints; Marvelseal (aluminum/polyethylene foil).
 - Unacceptable sealants: alkyd-based paints; polyvinyl acetate latex paints; oil-modified polyurethanes; lead-based paints; oil-based paints.
 - Gasketing materials must be inert. Silicone, acrylic felt or brush nylon are acceptable. Any gasketing containing rubber or rubber derivatives is unacceptable.
 - Objects may come in contact only with stable materials.
 - Acceptable materials: Mylar Type-D; Tyvek; acid-free paper, board or tissue; washed and undyed muslin or linen; polyester fabric; Plexiglas.
 - Unacceptable materials: wool; silk; polyurethane foams; carpeting.
5. Objects should not be placed in direct contact with wood surfaces, even when sealed.
6. No organic material (e.g., wood, leaves, etc.) may be placed in the same case as an object.
7. All construction in exhibit areas, including drywall and electrical work, must be finished before objects are installed. Interior case construction, including drilling in cases to install mounts, spackling and painting must also be completed before any objects are installed.
8. All case interiors and fittings must be allowed to off-gas for at least one week, and preferably three weeks, prior to object installation.

MOUNTS

1. All mounting materials in contact with objects must be stable.
 - Acceptable materials: sealed brass rods or flat stock (see #2 below) nylon monofilament; polyethylene surgical and heatshrink tubing; Plexiglas.
2. Clamps and brackets must be padded with non-abrasive, stable, inert materials.
 - Acceptable materials: polyethylene tubing; moleskin; acrylic or polyester-based fabrics, and Decco felt. Wool felt is **unacceptable** padding material. Metal brackets used to mount objects must be coated with a barrier, preferably 20% Acryloid B72 in acetone.
3. Mounts must adequately support the weight of an object and hold it securely without subjecting it to excessive stress. The mounts for objects in free-standing cases must not subject the object to undue vibrations or rocking when the case is bumped or jostled.
4. No mounts may be permanently attached to an object. Objects should not be secured in place with sticky substances, such as tacky wax, museum wax, pressure-sensitive tapes, or adhesives. Objects should not be tacked, nailed, stapled, screwed, or otherwise permanently affixed to any part of a case.
5. Objects may not be suspended by their handles, loops, hooks, or strings, no matter their original purpose. Objects such as textiles, paper, and barkcloth must not be mounted with sharp folds or pleats.

Exceptions or alternative proposals to these guidelines must be approved in advance by MPM's Conservation Section, Christine Del Re, Senior Conservator 414-278-2780 and may require written approval.

Please read guidelines carefully, sign one copy and return to MPM's Registrar with Loan Application.

Name:

Position:

Date: