

## SCHEDULE 4

### Casing and Mounting of Objects for Exhibitions

#### GENERAL

For conservation and security reasons, consideration must be given to casing Objects. Details of mounting requirements, materials and any conditions for specific Objects will be issued by the V&A.

- Display cases should be stable, ensuring that the Objects are protected from movement, vibration or impacts (e.g. screwed or bolted to the floor if island cases, or internal build elements if integrated).
- Structural and framing elements should be of sufficient strength to provide physical protection to the Objects, and to support the weight of the Objects and of the glazing specified.
- Cases should be made as air-tight as possible.

#### ACCESS TO CASES

Access to cases for Object installation/de-installation must be safe, simple and secure.

- Objects or staff should not be put at risk by the method of opening and closing access doors or panels.
- Access to voids or compartments in the plinth or case structure for lighting access, etc., should not weaken the structural integrity of the case overall.
- Methods of access to cases should allow for repeated opening and closing of the case throughout its use, without deterioration of components, e.g. sagging of access doors on hinges, excessive wear to beading, breaking of sealed joints, etc.

#### GLASS

- All glass used is to have polished edges.
- If budget allows, Optiwhite glass is preferred.

#### Case Structure:

- Display cases must be fitted with laminated glass, the thickness of which should be a minimum of 7.5 mm, meeting BS 5544 (1978) / EN 356 (2000).
- If the sheet size is over 1.8m x 0.9m the thickness of the laminated glass must be increased to 9.5mm or 11.5mm.
- Panels to be handled by technicians should not measure more than 2.0m x 1.0m. Larger panels will demand on-site attendance from outside contractors throughout the installation period, and proper consideration to Health and Safety issues.
- Any removable glass panels must be held in place securely, e.g. with troughs or rebates, both when they are locked and unlocked.
- Perspex may be considered for use for larger, less portable Objects if the intention is to protect Objects from touching rather than attempted theft by physical attack on the case.
- Toughened glass is not permitted for tops and sides of showcases.

- A glass hood, which has to be fitted over the Objects when the showcase is being closed, is not generally permitted. Please discuss with the V&A in good time.

#### Perspex:

- Where objects have not been identified as being high security risks, Perspex may be used for case glazing.
- Perspex glazing must be at least 6mm thick, and the gallery must have a human security presence during public opening hours.
- Perspex cases are to be secured using either locks or concealed security screws.

#### Shelving:

- Toughened glass (supplier to advise and assess) may be used for shelving.
- Shelf glass and fixings must be stable and secured adequately. Safe loading limits must be sufficient to support the Objects and their mounts.

#### BASIC CASE CONSTRUCTION AND MATERIALS

- The base of the case is to be structurally sound and able to support the combined weight of the baseboard, backboard, any lighting elements or silica gel, glass and all Objects and mounts.
- The base and/or sides of the unit can be constructed in steel (with or without powder-coat), birch-faced plywood or zero-formaldehyde (ZF) MDF, Fire Rated Class 1.
- Steel, ZF MDF or softwood can be used for the internal support structure.
- Emissions from ZF MDF and wood products should be controlled with the application of approved sealing products such as Moistop after painting. Care should be taken to ensure that any coating is applied offsite, with sufficient time allowed for curing and off-gassing, a minimum of 2 weeks.

#### SECURITY, LOCKS AND ALARMS

- A minimum of 2 high-security locks is required per opening. The types of lock and suites of keys to be confirmed with the V&A. For smaller openings or Perspex covers, security screws may be used to secure the opening.
- Small and/or portable Objects, those consisting of precious metals and gems, and those with particularly high values, should be displayed in cases glazed with 11.5mm laminated anti-bandit glass as described above (BS 5544 (1978) / EN 356 (2000)). Consideration should also be given to upgraded security for Objects such as firearms and edged weapons.
- High security cases should be framed, the framing bonded to the glass. The margin of the glazing edge covered by the frame is to be 25mm to 30mm.
- The possible need for alarm devices should be considered in the design of display cases. The V&A will advise at an early stage if these are required.
- Lock fittings and security screw heads should be as discreet as possible, preferably not visible from the front of the case.

#### **CASE INTERIORS**

- Base and backboard interior panels must be fixed securely in place, i.e. pinned, screwed split batten, or slotted.
- Cases should be designed with the labels and graphic requirements in mind. Where possible, labels and graphics are to be installed before objects, and they should be secured properly in position so that they cannot harm Objects if they fall.
- If boards are fabric-wrapped, this fabric must have passed the 'Oddy test', a scientific assessment of the chemical emissions of different types of construction and dressing materials and their effect on Object materials, pioneered by Andrew Oddy of the British Museum. If the test is more than 12 months old, re-tests will be required (the V&A to advise). The test takes at least 6 weeks, and this time must be fitted into the design schedule.
- Any MDF within case interior is to be zero-formaldehyde rating, and sealed using an approved sealant, e.g. Moistop.
- Painted finishes must be water-based: any other paint finish suggested needs approval by the V&A. If other paint types are used, time should be built into the design schedule for testing.
- Any adhesives or bonding materials used must be approved by the V&A, although guidance can be supplied.
- Materials used for Object mounts must be discussed with, and approved by, the V&A. Safe options are acrylic, glass and powder-coated metals.
- All internal finishes must be allowed to off-gas fully before Object installation. Times will vary according to the materials/finishes used: the V&A can advise.

#### **INTERNAL CASE LIGHTING**

- The compartment containing the light source must have its own separate and secure access point for maintenance and re-lamping, which does not affect the security of the Object display compartment.
- The light source compartment must be ventilated adequately to avoid heat gain.
- A diffusing layer with UV-filtering should be used between the light source and the display compartment. This layer must be fixed securely in place.
- Any fibre-optic light outlets or lenses in the display compartment must be secured firmly to avoid them dropping into the case.

#### **SILICA GEL**

- Some Objects may require buffered humidity control, such as ArtSorb sheet silica gel or packages of granular silica gel.
- The compartment containing the silica gel must have its own separate and secure access point, which does not affect the security of Object display compartment.
- The compartment should be of adequate size to contain the appropriate amount of silica gel for the size of the compartment to be conditioned: as a guide, 9kg of granular silica gel is required per cubic metre for a temporary display case, or 4kg of sheet ArtSorb per cubic metre. This may be reduced with increased air-tightness of cases.

- The silica gel compartment should be designed in such a way as to maximise the exposed surface of the silica gel in the direction of the display compartment.
- Sufficient air-flow must be maintained between the silica gel compartment and the display compartment.

#### **OPEN DISPLAY**

- Objects on open display, i.e. which are not cased, or framed and glazed, must be positioned at least 1 metre away from public reach.
- Barriers will be required for vulnerable Objects, e.g. unglazed paintings or wall hangings. All barriers should be designed so that they are put in place only after the Object installation is complete.
- The barrier should be of a design and height as to be visible easily to visitors, and not constitute a trip hazard.
- Vulnerable Objects may require battery-operated vibration or proximity alarms to be fitted.
- Free-standing 3D Objects to be viewed in the round must be displayed on plinths (heights determined by viewing requirements) and have at least 1 metre distance all round the perimeter to ensure Objects are out of reach.
- Where heavy or bulky Objects are to be displayed on plinths, the front sections of those plinths should be removable to allow access for special lifting equipment.
- For wall-hung framed Objects, the wall or partition must be sufficiently strong and stable to support the weight of large Objects, especially if backed and glazed in their frames. The surface should also be of materials suitable and thick enough (at least 20mm) to support fittings attached by screws.
- If these provisions are absolutely not compatible with the displays, the Borrower will use their best endeavours to ensure that the Objects cannot be touched by visitors by making sure that they are not placed in the direct route of tours, or where visitors are able to touch them or lean against them.

#### **FURTHER INFORMATION**

- Guidance on case specifications, suppliers, high attack resisting cases, glass and environmental standards can be obtained from the Arts Council England.