

Description:

The purpose of the section is to highlight the current applicable UMD design standards for the design, selection and installation of interior floor surface materials.

Related Sections:

- 10 21 00 Restroom Requirements
- 01 81 13 Sustainable Design Requirements

Effective Date:

January 1, 2023

Applicable Standards:

- TCNA Tile Council of North America
- ANSI A137.1
- Maryland Department of General Services – Maryland Green Purchasing Committee Approved Specification – Flooring and Adhesives including the following Legislation, statutes and regulations:
 - Environmentally Preferable Purchasing (COMAR:21.11.07.09)
 - Mercury and Products that Contain Mercury (COMAR: 21.11.07.07)
 - Verifying Environmental Claims (State Finance and Procurement Article 14-410)
 - Limitations on Hazardous Substances (Environment Article 6-1201-1202.1)
 - Limitations and Prohibitions on Heavy Metals in Packaging (Environment Article 9-1902)

General Requirements:

Durable, sustainable, and appropriate floor finishes throughout a building are a high priority for maintenance and safety reasons. All flooring and adhesives must be free of antimicrobial treatment, fire retardant treatment, formaldehyde, PVC, PFOAs and Ortho-phthalates. Adhesives must not contain chemicals that are on the Prop 65 (OEHHA) List of substances that are known to cause cancer, birth defects or other reproductive harm. All material should be identified and described to include environmentally preferable attributes. Examples include:

- Made with bio-based ingredients
- Made with renewable and/or recyclable materials
- Mercury free
- Made with post-consumer recycled content
- Delivered with efficient, minimal use of packaging materials
- **Adhesives**
 - Adhesives must not contain chemicals that are on the Prop 65 (OEHHA) List of substances that are known to cause cancer, birth defects or other reproductive harm.
 - Must not contain chemicals that are listed by the Association of Occupational and Environmental Clinics (AOEC) as an asthmagen. The AOEC list can be accessed at: <http://www.aoecdata.org/expcodelookup.aspx>.
- **Concrete Floors**
 - Interior concrete floor areas, which are scheduled to receive paint, shall be painted and sealed with a non-slip epoxy finish.
 - Concrete floors shall be cleaned and etched using muriatic acid as required by manufacturer's recommendations prior to painting and/or staining.
- **Resilient Tile Floors**
 - Resilient tile shall be acceptable for classrooms, offices, corridors, administrative areas, departmental/college areas, elevator cab interiors, fast food service areas, custodial storage rooms, and copy rooms for ease of maintenance.
 - Resilient tile floors shall be cleaned, sealed, and polished by the construction contractor in accordance with the manufacturers' specifications.
 - Vinyl composition tile shall be asbestos free.

- For any installation involving removal or enclosure of existing VAT, refer to Section 01.81.16 - Environmental Health and Safety.
- **Entrance Area Flooring**
 - Entrance and vestibule mats shall be installed in all public entrances.
- **Carpeted Flooring Material**
 - Carpet must not contain coal fly ash or polyurethane backing
 - The use of carpet is recommended for aisles of lecture halls, classrooms, and Administrative offices/suites.
 - Provide molded nosing for steps and transition strips between carpet and adjacent material when carpet is specified.
 - The grade of carpet quality shall be determined by space needs, although the use of Carpet Tile is preferred over the use of Broadloom Carpet in most conditions.
 - Specify carpet with the following characteristics, as a minimum and unless project requirements dictate otherwise. All carpet specified must be appropriate for heavy traffic end use.
 - 100% synthetic backing with permanent moisture barrier to eliminate absorption (below grade installations).
 - An electrostatic propensity of 1.5 KV or lower, anti-static.
 - Either Direct glue down installation using adhesive recommended by carpet manufacturer or mechanically fastened carpet installation eliminating the use of adhesives.
 - Carpet Pad - Where used, under pad to be either hair and jute or synthetic foam.
 - 10 year warranty on wear and edge ravel (delamination) and color-fastness to light.
 - Conform to applicable code for flame/fuel/smoke rating requirements in accordance with latest ASTM requirement. Carpet shall meet ADA minimum coefficient of friction of .6 for accessible ramps.
 - Concrete shall be sealed prior to carpet installation.
 - Discontinued products or end-of-runs are unacceptable.
 - Extra materials (5% or 50 square yards maximum) are required for each type and color of carpet specified and shall be delivered to the Department of Operations and Maintenance.
 - Each type of carpet shall be from one dye lot only.
- **Vinyl or Rubber Rolled Flooring**
 - Acceptable for elevator cab interiors.
 - Preformed stair treads are preferred for stairs. A diamond pattern provides a more maintainable surface and is preferred.
 - Preference is for Rubber or Bio-Based Flooring
- **Terrazzo Flooring**
 - Terrazzo is acceptable for vestibules/entrances/lobbies, corridors and food service areas.
 - Walk-off mats should be considered for entrance areas.
- **Quarry Tile Flooring**
 - Quarry Tile with double abrasive grain, is acceptable for food preparation areas, serving areas behind counters, laundries, and dishwashing areas.
 - Grout should be sealed.
- **Wood Flooring**
 - Acceptable for dance floors, handball courts, basketball courts, racquetball courts, gymnasiums, and other sports activity areas and also where required for acoustical treatment.

- **Ceramic Tile**

Acceptable for use in typical restrooms or similar wet areas.

 - **Floor Tile:**
 - Designers are required to identify and specify the surface friction criteria for any selected floor tile finishes according to the DCOF Acutest (or similar) testing method.
 - Any selected floor tile materials used in public areas must be certifiable according to ANSI A137.1 by any each manufacturer.
 - **Wall Tile:**
 - Wall tile designated at interior walls should install at a minimum height of 4'-0" above finished floor.
 - Required in Toilet Rooms behind Toilet Fixtures
- **Seamless Flooring and Covered Base**
 - Shall be acceptable for animal care facilities and "clean" rooms.
- **Rubber Wall Base**
 - Acceptable with flooring of resilient tile and/or carpet.
 - Unless directed otherwise by UMD, vinyl material used as a wall base material is not allowed.