



ENVIRONMENTAL HEALTH

County of Santa Cruz

HEALTH SERVICES AGENCY

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Approved Floor Materials for Retail Food Service Facilities

Flooring can promote sanitation and staff safety. A properly installed floor surface can make it easier to remove food, remove grease and prevent water accumulation. Food debris build-up, uneven surfaces and standing water can create slip, trip and fall hazards. Floors should be designed to facilitate cleaning, be maintained dry and create an environment that promotes staff safety.

No one floor covering is suitable for every type of application and no one floor surface will prevent all accidents. Things to consider when choosing a floor system are:

- Where will the flooring material be applied? (i.e. cook line, warewash or storage room)
- Will there be food, grease, heat, and/or moisture exposure?
- How much foot traffic and impact will the flooring receive?
- How and at what frequency will the floor be washed?
- Are there any floor drains requiring sloping?

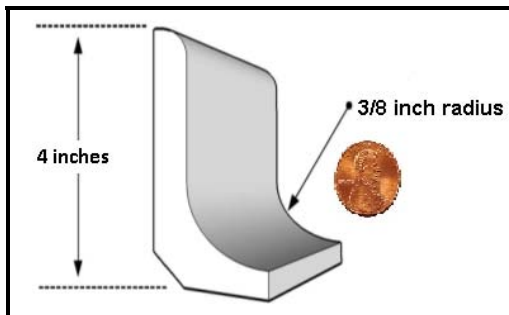
While some slip resistance will aid in preventing slip hazards, it can create a situation where the floor is no longer cleanable. Vice versa, installing excessively smooth flooring in a high moisture area can lead to slip hazards.

California retail food regulations require that floor surfaces in the following areas be smooth, cleanable, of durable construction, and of non-absorbent material:

- All areas in which food is prepared or packaged
- Food and food service storage areas
- Utensil and equipment washing areas
- Bars
- Restrooms and hand washing areas
- Walk-in refrigerators and freezers
- Wait stations
- Self-service food and beverage area
- Garbage and refuse storage areas
- Employee change and storage areas
- Janitorial facilities

Depending on application, the flooring should also have resistance to heat, cold and chemical exposure.

Retail food regulations require that the floor surfaces in the above noted areas be installed with an integral coved base at the juncture between the floor and wall. The coved base should create a minimum 3/8 inch radius rounding between floor and wall and extend at least 4 inches up the wall. A 3/8 inch radius is equal to the radius of a penny. Equipment cabinet bases, equipment curbs, and large pieces of equipment designed to be sealed to the floor are required to have an approved cove base around all exposed sides.



A coved base makes the floor easier to clean, monitor and protects wall and cabinets from deterioration as a result of water damage. Cove base approval is largely determined by the quality of installation. Stainless steel or aluminum base coving may be approved in some applications if the coving forms a true radius (no angles) or is keyed-in to be flush with the floor surface. Metal cove strips such as a Schluter brand base must be keyed-in and be flush with both floor and wall tile.

Rubber top set coved base is not an approved installation.

Flooring must be installed so as to prevent standing water. Some applications require that the flooring be installed along with a drain system. Floor drains are required in, but not limited to the following areas:

- Where floors are water-flushed for cleaning (i.e. kitchens generating grease, meat or fish handling areas, produce trimming areas, refuse disposal areas, dishwashing areas, bars).
- Where pressure spray methods are used for cleaning.

Where floor drains are provided, the floor surface must have a slope of at least 1:50 to the drains. The drains must be located for ease of inspection and maintenance, but are not allowed inside walk-in refrigerator or freezer units. Floor drain grates must be provided and installed flush with the surrounding floor.

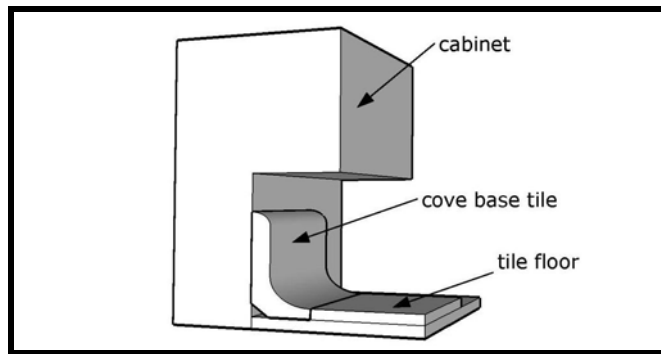
When a grease trap is installed in a traffic area, the grease trap lid must be installed flush with the floor. The area around the grease trap must be sealed to prevent the leaking of water to the ground below and the accumulation of water around the sides of the grease trap. Grease build-up can result in bad odors and fly infestations. The cover must also be readily accessible for inspection and cleaning of the trap.

The use of anti-slip floor finishes or materials must be limited to areas where necessary for safety reasons. Flooring under equipment shall be smooth. Washable rubber floor mats and proper footwear can assist in preventing falls

Acceptable Flooring Materials

Quarry and Ceramic Tile.

Quarry and ceramic tile shall be impact resistant and have a minimum thickness of ¼ inches. The cove base tile thickness should correspond with the floor tile thickness. Uneven and un-grouted tile installations are unapproved. The base must be installed so as to create a smooth rounding between wall and floor. There should not be a raised lip to the cove base tile. Grout must be applied evenly and be resistant to grease, oil, acid, and water. Epoxy grout is recommended.



Correct Tile Base Installation

Epoxy and Resin Based Flooring Systems.

Epoxy flooring must be troweled-on with a uniform thickness of at least 3/16 inch thickness. Epoxy paint and rolled-on epoxy commonly used on garage floors are not acceptable. The epoxy flooring system must be designed for commercial food service applications. The Epoxy and resin system must be designed to create a continuous cove base up the wall. Anti-slip treatments are limited to high traffic areas and cannot be so rough as to prevent mopping. Flooring around equipment must be smooth and cleanable. The following have been approved:

- Tera Lite
- Stonhard Stonclad, Stonclad Ut, Stonshield Hri
- Sunbelt 110
- Everlast
- Westcoat Epoxy Mortar, Slurry, Or Double Broadcast
- Dex-O-Tex Cheminert K
- Dur-A-Flex Ploy-Crete Md
- Basf Selbatwede 41
- General Plymers Fastop 125
- Sikafloor 110, Purcem 125, Purcem 19n

A sample and specification sheet must be submitted to this Agency for approval of an epoxy flooring system not on this list.

Sheet Vinyl

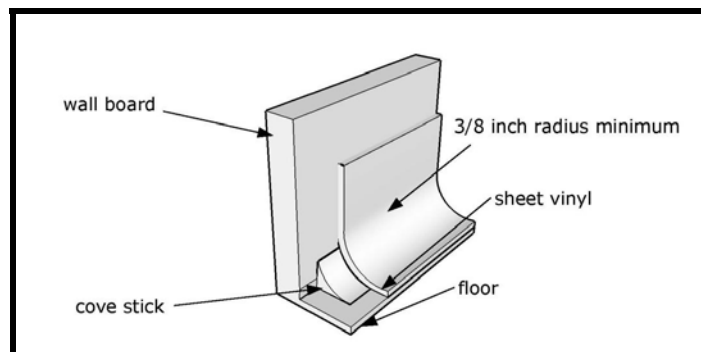
Commercial sheet vinyl must be used. The proposed flooring must be supported by manufacturer specification sheets. **VCT, felt backed vinyl or vinyl layered with paper image are unapproved.** Sheet vinyl shall be installed continuously across the floor and have heat welded seems or be chemically sealed. The vinyl installation must be smooth, spread evenly and be impervious to water, grease, and acid. Sheet vinyl shall extend continuously up the wall at least four (4) inches forming a 3/8 inch radius at the floor/wall juncture. The cove floor/wall juncture shall be supported by a cove-stick and a metal cap shall be installed at the top of the base. Sheet vinyl flooring located in cooking areas shall have a minimum wear layer of .080 inches and be resistant to grease and high temperatures. The following have been approved in commercial kitchens including cooking areas:

- ALTRO Maxis Unity, ALTRO Stronghold 30, ALTRO Atlas 40
- Protect-ALL Commercial Flooring
- Allied Industries Eco-Grip

Sheet vinyl flooring located in non-cooking areas such as restrooms, janitorial rooms, dry storage rooms, service areas, and beverage areas shall have a minimum wear layer of .050 inches, be durable, and approved by the manufacturer in areas exposed to water. The following have been approved:

- Altro Cordiale, Impressionist II, Stronghold 25, walkway 20
- Armstrong Medintech, Safeguard
- Mannington Assurance, Biospec MD, Lifeline II, Relay, Magna

Submit a sample and specification sheets to this Agency for review of product not on this list.



Correct Vinyl Flooring Installation

Metal

Diamond plate flooring can be used in walk-in refrigerator and freezer units. Interior and exterior walls of walk-in coolers or freezers may use a top set metal cove base (stainless steel, aluminum or galvanized) if used against a similar metal wall.

Unapproved Flooring Materials

Glazed porcelain tile with a friction coefficient of less than 0.5.

This may be installed on walls. Slippery tile may result in staff and patron injuries when mildly wet. OSHA recommends a 0.5 friction coefficient for employee safety and ADA recommends a 0.6 friction coefficient to prevent hazards for people with disabilities. However, the flooring system must remain smooth and cleanable to comply with California Retail Food Code. Flooring with a friction coefficient over 0.8 may pose a cleaning issue. Provide a sample to this Agency for review.

Sealed concrete flooring

May be installed in customer areas, locker and employee change rooms, and in storage rooms where food or beverages are stored in original unopened packaging (no bulk food bins allowed).

Vinyl Composition Tiles (VCT) with rubber base, and residential linoleum.

May be installed in vending areas, customer areas, locker and change rooms, and in storage rooms where food or beverages are stored in original unopened packaging (no bulk food bins allowed).

Slate, travertine tile, or other natural stone tiles

May be installed in customer sales and dining areas.

Wood or carpet

May be installed in customer sales and dining areas, except within 3 feet of self-service food or beverage locations.

Asphalt

Asphalt may be installed on outdoor trash enclosure floors and be sloped to drain.