

DESIGN CRITERIA

1. Related Sections: See related Division 03 Design Criteria and Standard Commissary Room and Finish Schedule in Appendix "A".
2. Exposed concrete floors (of various types) are becoming more popular in retail facilities, as they are not subject to bond failure between the floor finish system and the concrete floor slab, commonly caused by moisture vapor transmission (from below the slab) and surface moisture (from above the slab). Surface moisture caused by refrigerated display case condensation, wet product displays (such as produce), and daily floor cleaning allow water to puddle which seeps into joints of applied floor finish systems causing bond failure.
3. Shrinkage cracking, differential settlement, slab curling / cupping, or any other surface defects will be visible in exposed concrete floors. Repairs are difficult to mask (i.e., conceal). Specifications will need to be carefully prepared, with emphasis placed on quality control for both material and installation. Guide Specification Division 03 Section Cast-In-Place Concrete has established floor flatness and floor levelness values at F(F) 50 F(L) 40 to minimize the appearance of waviness in a highly polished floor. Control joint spacing should be carefully planned to minimize (and hopefully eliminate) uncontrolled cracking.
4. The exposed concrete floor specified in Division 03 Section Polished Concrete Finishing is a natural concrete floor with polished finish, consisting of:
 - A. Concrete Dye
 - B. Concrete Polishing System
 - C. Joint Filler
5. The solvent-based dye is formulated using extremely fine molecules of color designed to penetrate and color concrete floor slabs. All bond barriers must be removed prior to application of dye. This dye was created for use with polished concrete. Solvent-based dye is for interior applications only. Color will fade over time in areas where dye is exposed to frequent UV light. The quality of UV protection in skylights, windows, and doors may also determine the amount of time it takes before color must be re-applied. Concrete slabs with high moisture content may adversely affect solvent-based dyes. The basis-of-design manufacturer for the solvent-based dye is "AmeriPolish Classic" Solvent-Based Concrete Dye".

It is important to note that the EPA has granted acetone VOC-exempt status. In addition, acetone is not a hazardous air pollutant (HAP) under the Clean Air Act Amendment of 1990. Most states follow these federal guidelines. A/E should verify with individual state requirements.

On addition/alteration projects where the commissary will remain occupied throughout construction, it may be necessary to use water-based dye. Coordinate with DeCA Project Manager during design of Project.
6. The joint filler used with polished concrete floors is a rapid setting, 100% solids, flexible, two part polyurea joint filler with a shore hardness in the 60's. It is designed to fill and protect joints in industrial floors that are subject to traffic such as trucks, forklifts or steel wheeled carts. Joint filler should be installed per manufacturer's recommendations. Overfill joints and trim joint filler flush with floor surface after hardening.

END OF SECTION