

Installation

Acoustical ceilings that are unsatisfactory in appearance are often the result of poor application or disregard of the manufacturer's instructions. Here are a few recommendations to consider when designing with and specifying an Armstrong ceiling system.

Jobsite Conditions

Before Armstrong ceiling materials are installed, the units (ceiling panels or tile) should be permitted to reach room temperature and have a stabilized moisture content. They should not, however, be installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space (exception: ceilings with HumiGuard Plus or HumiGuard Max performance). Some Armstrong ceiling materials are more abuse-resistant than others. It is not good practice to locate acoustical ceiling tile or panels on low wall or ceiling surfaces where they might be damaged. Dirty air can soil any ceiling, although ULTIMA™ and OPTIMA have superior resistance to soiling. Proper design for both supply air and return air, and maintenance of the HVAC filters and building interior space are essential to minimize soiling. Before starting the HVAC system, make sure supply air is properly filtered and the building interior is free of construction dust.

Temperatures and Humidities During Installation

Acoustical materials are interior finish products and are designed for installation to be carried out in temperature conditions up to 86°F (30°C) in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation. (The sole exception shall be if the suspension system is Armstrong PRELUDE PLUS, in which case the temperature and humidity conditions shall be waived.) There shall be proper ventilation of the plenum in high moisture areas. All plastering, concrete, terrazzo or any other wet work should be complete and dry. All windows and doors should be in place. The heating, ventilating and air-conditioning systems should be installed and operable, where necessary, to maintain proper temperatures before, during and after installation of the acoustical material. Note: The preceding restrictions do not apply to ceilings with HumiGuard Plus or HumiGuard Max performance.

Concealed Tile For Glue-Up (Adhesive) Installation

The temperature of the tile adhesive and the surface to which the ceiling tile is adhered may cause failure. Do not install acoustical tile when the room temperature exceeds 100°F (38°C) or when the room or adhesive temperature is below 50°F (10°C). Application to damp plaster, or in a damp room, may cause dimensional changes in the tile and failure in the adhesive. Tile adhered to a painted surface will fail if the paint is loose or peeling. Do not apply adhesive to wood or metal. Recommend Adhesive Henry #237B acoustical tile adhesive.

Thermal Insulation Mineral Ceilings

The use of overlaid insulation placed on, and supported by, mineral ceiling panels is not recommended. The additional weight supported by the panel could result in panel sag in high humidity conditions. If job requirements are such that insulation is necessary at recommended occupancy conditions, limit such insulation to a maximum of .26 lb/ft² (R-19 Fiberglass). Only roll insulation is recommended and must be applied perpendicularly to the cross tees with the grid supporting the weight of the insulation. For roll type insulation that

either has a foil or kraft paper vapor barrier on one side, always install the vapor barrier in the down position facing the back of the ceiling panel. If the use of batt insulation is required, limit use to 24" x 24" panels (use only nonfaced batts maximum R-19).

Thermal insulation should not be installed on the back of Fire Guard panels in a fire resistive ceiling membrane unless so designated in the specific UL roof/ceiling or floor/ceiling design assembly assigned to the structure; i.e., P265 or P250.

Fiberglass Ceilings

Armstrong fiberglass ceiling panels are recommended for use when additional thermal insulation is required to be overlaid on the back of the ceiling panels. Specific limitations apply. Please contact TechLine for specific fiberglass backloading recommendations.

Selecting Lighting

When selecting any type of lighting, it is important to evaluate the fixtures (lighting system) and ceiling panels or tile as components that work together in an integrated system. Important considerations include both initial and long-term costs, energy consumption and perhaps even the lighting system's potential impact on worker effectiveness within the space. It is also always advisable to consider the effect it will have on the appearance of an acoustical ceiling. Typically, grazing light and indirect lighting should be avoided with 12" x 12" concealed grid tile installations.

Unfavorable ceiling appearance may be produced by light striking the ceiling surface at small angles. This condition most frequently occurs with ceiling edge lighting from fixtures, cove lighting and/or high windows. This will accentuate minor surface variations that are beyond the control of manufacturing standards for mineral fiber. Further, minor differences in paint gloss often are magnified by these conditions. Mitigating the problem is best handled at the lighting source with proper shading, diffusing and/or light redirecting devices.