



WCB
WALL AND CEILING BUREAU

5726 Sonoma Drive
Pleasanton, CA 94566
Phone: 925.600.0475
Fax: 925.600.0618

TECHNICAL BULLETIN

Code Dialogue

»ASTM C-926 Environmental Conditions

Portland cement-based plaster brown coats should not be applied to frozen scratch coats, and finish coats should not be applied to frozen brown coats. When the outside temperature is below 35 degrees it is not wise to plaster without tenting the building or adding up to 10% Calcium Chloride. 40 degrees and rising outside temperatures normally do not affect the set of the plaster. The most conservative wintertime parameters should include starting plastering as the temperature rises from 35 degrees and stopping when the temperature starts to drop. This will assure that the applied plaster will set before it freezes. Freezing kills the set and the plaster must be removed and replaced.

Curing

The curing of plaster is a process some have determined to be 28 years. But it gains most of its strength during the first 7 days. This depends on the type of cement. Common Cement seems to cure faster than Plastic Cements. No plaster will cure without moisture, either added back into the plaster, or retained in the panels. The longer moisture stays in the plaster the quicker it cures. Moisture leaves plaster by evaporation. Hot days and windy conditions can suck the moisture out of a plaster panel in less than an hour.

Curing stops when the panel is dry. It starts again when the panel has moisture added to it. This process of moist curing and for how long is covered in Table 25-f of the 1997 UBC. We suggest moist curing at least morning and evening, for two days for the scratch and the brown coat. If a finish coat is applied to a dry brown coat on hot days it can flash dry. Powdery and flaky finish is indicative of this condition.

The Moh's hardness test is an on the job test to see if a plaster panel meets plastering industry curing Standards. It is a scratch test that assigns levels of hardness from diamond at 10 to Talc at 1. Cured plaster panels generally are 4-5. A penny is 3-4. If the penny scratches the wall it is too soft and is not cured. If the wall scratches the penny it is cured .It is a simple test and let's you

know whether your plaster panel is cured.

Moist curing a wall is done by opening up the pores of the plaster with a fine mist, around the whole building, then a more direct spray from the top down until you see water weeping from the weep holes, fully saturating the plaster.

Interval

The interval of time between the scratch and brown in the UBC has been 48 hours for years. However it was thought in the industry for a long time that curing the scratch for 7 days and curing the brown for 21 days produced a better plaster job. Many now believe that placing the brown coat over a green scratch coat produces greater crack resistance because the panels cure together. This is moving towards the installation procedure contained in 2508.6 of the 1997 UBC.

In fact we have companies in Northern California that precisely mix their plaster so that it can be applied in one pass, a full $\frac{3}{4}$ " inch. The reason for having a scratch and brown is simple, to keep the plaster on the wall and off your shoes. It has to be spread in two thinner panels instead of one complete scratch/brown combination. We find a better chemical bond when the two coats are applied and cured in close conjunction. We also find greater crack control.