

# TRADE OF PLASTERING

## PHASE 2

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### Module 3

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### Slabbing, Skimming, Dry Lining and Floors

#### UNIT: 3

## Levelling a Ceiling using Lightweight Plaster

*Produced by*

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*Some images & text courtesy of Gypsum Industries Ltd.*

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## Introduction

Welcome to this section of your course which is designed to introduce you the learner, to identify bonding coat plaster.

## Unit Objective

By the end of this unit each apprentice will be able to:

- State the qualities of bonding coat

# 1.0 Qualities of Bonding Coat

## Key Learning Points

- Insulation qualities of bonding plaster

## 1.1 Bonding Plaster



The plasters are non-combustible material when tested in accordance with BS 476: Part 4 1970 (amended 1984). Gypsum plasters also the requirements for Class O surfaces.

It is recommended that the background temperature should be at least 5 degrees C and the plaster should not be subjected to temperatures below that, before it has set. Dry bagged plaster is not affected by low temperature.

The plaster is not suitable for use in situations where the temperature exceeds 43 degrees C.

Bonding coat should be applied to the grey face of plasterboard at a thickness of 10 mm.

Plastering over in-situ concrete has long been regarded as one of the plastering trades most complex problems. Depending on mix, aggregates, chemical additives, vibrating and shuttering, the surface of concrete can vary from one contract to another and cannot therefore, be a consistent background for plastering. However, experience over many years has shown that once the concrete surface is clean and free of all dust, mould, oil or other release agents the following methods may be suitable: (a) the application of Bonding coat over thistlebond-it or (b) the application of Bonding coat over a scudcoat incorporating an S.B.R. bonding agent.

## Bonding Plaster

The plastering of in-situ concrete has for long been regarded as one of the plastering trades' most difficult problems. Depending on mix, aggregates, chemical additives, vibrating and shuttering, concrete can vary from one contract to another and cannot, therefore, be considered a consistent background for plastering. A very smoothly finished concrete can inhibit good adhesion of the plaster as can concrete with a very high suction.

The shearing force set up by the differential in expansion between plaster and concrete can be such as to cause loss of adhesion of the plaster. The formulation of a plaster capable of dealing with all combinations of these factors has so far not been achieved. However, experience over hundreds of successful contracts has shown that the use of Bonding Plaster has provided the most satisfactory solution to the problem.

Bonding Plaster is one of the range of lightweight, retarded hemihydrate, premixed gypsum plasters, requiring only the addition of clean water to prepare them for use. Bonding Plaster is a base coat for low suction backgrounds having exfoliated Vermiculite as an aggregate and is manufactured to 'I.S.:27:Part 2:1975' (B.S. 1191:Part 2:1973). It has excellent adhesion properties and the additional advantage that its resilient nature helps to keep cracking caused by background movement to a minimum.

## Application

Special care has to be taken when plastering on concrete surfaces. To achieve the most satisfactory results the general instructions as listed below should be carefully followed. The concrete surface should be cleaned down and be free of all dust, mould oil or other release agents. When a wet plaster mix is applied to dry concrete, the air displaced from the surface pores is trapped between them, thus preventing a good contact between the plaster and the concrete. The concrete should therefore be wetted with a brush to displace the air before the plaster is applied. This should be done not more than five to ten minutes before plastering, since the effect is lost when the water is completely absorbed by the concrete. It is important to use clean water.

When the suction of the concrete is so high that the film of moisture is very quickly absorbed, the use of a bonding agent may be required. The manufacturer of the bonding agent should be consulted. Whether or not a bonding agent is used a trial panel should be plastered and tested for adhesion when dry. Bonding coat should be trowelled tightly on to the concrete with firm pressure, built out to the required thickness, ruled to an even surface and lightly scratched to form a key. Bonding should normally be applied to a maximum thickness of 10mm, made up of 8mm floating coat and 2mm finishing coat. Where a greater thickness is required, each coat should be a maximum of 8mm thick and be thoroughly cross-scratched to provide a mechanical key. Each coat must be set before the next is applied.

The floating coat should not be thicker than is necessary to bring the work to a level surface, particularly on soffits. The plaster must not be mixed to a softer consistency than normal in an effort to apply a very thin coat, since the additional water used will reduce the strength of the plaster. Precautions should be taken in very dry conditions to prevent the plaster from drying out before it sets.

S O L A S

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