

Intermediate Module 332

The Curing of Coatings

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Introduction

This module is divided into three sections.

Section 1 is concerned with the drying and curing of coatings by both stoving and radiation processes. Both box ovens and conveyerised forced draught ovens are described along with disposal of solvents and waste fumes. Finally, in this section, the special requirements of powder coatings are presented.

Section 2 is devoted to radiation curing, where particular emphasis is placed on IR curing, listing both advantages and disadvantages. The principles of UV and electron beam curing are described, along with the importance of oven siting in manufacture.

Finally, in **Section 3**, the factors affecting the choice of application and cure are discussed and practical examples are given of the appropriateness of these considerations in practical situations.

Structure of the Module

The module consists of a theory block of 3 sections, 1 CMA and 1 ASG.

The total study time will be approx.10hr, with additional time being required for the CMA and the ASG. Experience indicates that on average, the total time to complete this module will be of the order of 4 – 6 weeks.

Marks for the module

CMA	20%
ASG	35%
End Test	45%

For full certification, the CMA and the ASG must be completed satisfactorily.

An overall mark of 50% or more is necessary for successful completion of the module, with students achieving at least 40% of the marks available in each element.

It is advisable to wait until you have completed 3 modules before sitting the end tests, as this will involve only one visit to the examination room.

Module Prerequisites

It will be a distinct advantage if students tackling this module have already studied some science subjects to GCSE or relevant NVQ level and have completed other modules at Foundation level.

A student should be currently employed within the Coatings Industry or be with a supplier to this Industry.

Past relevant experience of employment within the industry would be a distinct advantage.

SAQ – Self Assessment Questions

Although these do not carry any marks for completion, nevertheless they are important to the student, as they show that the Section has been clearly understood.

The answers to SAQs may be found in Appendix 1.

ASG – Assignment Exercise

There is one ASG, in Module 332. It is concerned with suitable stoving schedules for a coating and is fully described in Appendix 2 of the Module.

CMA – Computer Marked Assessment

The CMA may be found on the website. Full details of how to complete this important part of the Module may be found in Student Guide sent to you as a general introduction to modules.