

Intermediate Module 333

Coatings – Safety, Health & Environmental Aspects

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Summary

On almost every surface we see there is some form of a coating. They enhance the appearance of the finished article, and they are essential for the protection of materials. However, the coatings are made of chemicals, many of which have adverse effects on human beings and on other living things. There are mechanical and electrical hazards involved in their manufacture and application and hazards due to flammability and toxicity of components in the coatings. There is the risk of pollution, should they escape to the outside environment.

The law requires that the workplace be safe to work in and that a company does not put employees or others at risk. Emphasis must also be given to environmental issues, adding to the pressures on the coatings industry. Conservation of resources and pollution control must somehow be balanced against the need for economic and effective coatings.

This module aims to provide a general awareness of the law and of the safety and environmental issues in our particular industry. Hopefully, it may whet the appetite of some readers enough for them to seek formal qualifications in the subject.

It is expected that it will take approximately 10 hours to complete this module, including the assignments involved.

Structure of the Module

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Learning Objectives

For each topic in the module, there is a learning objective. These objectives are listed immediately before the Study material.

Marking Scheme

The marks are allocated to the different features of the module, as follows:

ASG 1	20%
ASG 2	15%
CMA	20%
End Test	<u>45%</u>
TOTAL	<u>100%</u>

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.

Self Assessment Questions (SAQ's)

The answers to SAQ's can be found in Appendix 1. If you have any difficulties, go over the text again to make sure that you understand the answer. Ask your Tutor or Counsellor to explain anything you do not understand.

Computer Marked Assessments

When you have finished the module, a note in the text will guide you to the Computer Marked Assessment (CMA) on the website. Send the completed CMA to your Tutor for marking. Receipt of the CMA to your tutor will also tell them that you have completed the module and that, if necessary, they must arrange an End Test.

Assignments

In Sections 2 and 3, you will be asked to carry out Assignments (ASG's) on a given topic. Send the completed ASG's to BCF for marking.

The Module Calendar

We expect that the amount of learning material in this module can be completed within a month of starting.

Note: *The subject of Safety, Health & Environment is dealt with in detail in:*

Safety at Work – by John Ridley

ACOP to the Management of Health & Safety at Work etc. Regulations, 1999.

Successful health and safety management – HS(G)65

Five steps to risk assessment – IND(G)163(L)

Copies of Codes of Practice and Guidance Notes on a whole range of topics are available from the HSE. Most of these can be downloaded free of charge – see www.hse.gov.uk/pubns. Copies of legislation are available from your local branch of *The Stationery Office* or downloaded from www.legislation.gov.uk. For guidance on environmental issues, contact the Environmental Protection Unit of your Local Authority.

Please note that regulations are regularly revised and it is essential to keep up to date with the latest legislation.

Objectives

At the end of this module, you should be able to do the following:

Section 1. Legislation

- 1.1. Compare and contrast the two methods by which UK law is created
- 1.2. Give a brief outline of the main safety, health and environmental legislation and describe the degrees of duty that can be imposed

Section 2. Health & Safety

- 2.1. List (a) the main specific duties imposed on employers by the Health and Safety at Work Act to control the workplace and (b) the duties imposed on employees
- 2.2. Define the terms 'accident' and 'near miss' and discuss the importance of each in formulating safety procedures

- 2.3. List the stages in carrying out a risk assessment, describing the principles involved in determining 'acceptable risk'
- 2.4. Identify the factors that affect health and safety at work giving examples
- 2.5. Describe strategies for controlling risks
- 2.6. Identify legislation relating to product liability and explain its purpose
- 2.7. Give examples of workplace hazards that are found in the coatings industry
- 2.8. Outline the importance of individual participation in safety matters and carry out a risk assessment

Section 3. Environment

- 3.1. Define the terms 'environment' and 'ecology', quoting an example of how an environment can pollute itself to extinction
- 3.2. State some of the important milestones in human development, which have produced the environmental crisis
- 3.3. List the effects of pollution with explanations of how each has been caused
- 3.4. State the main duties imposed on companies by environmental protection legislation
- 3.5. Describe strategies for controlling environmental issues
- 3.6. Give examples of areas of a company's activities where improvements in environmental control might be made and carry out an environmental survey