

Methods of testing

Plastics —

Part 5: Optical and colour properties, weathering —

Method 540C: Determination of ultraviolet radiation intensity using polysulphone film

IMPORTANT NOTE. Before reading this method it is essential to read BS 2782-0, issued separately.

UDC 678.51.8:678.01:535.68:620.193.6

Foreword

This method has been prepared under the direction of the Plastics Standards Committee. It describes a procedure based on the use of polysulphone film to determine quantitatively a dose of exposure to ultraviolet (UV) radiation having a wavelength of less than 330 nm. When used for a controlled period of time, it allows the ultraviolet radiation intensity of a lamp to be measured. It can be used therefore to measure or compare the outputs of lamps, with or without filter systems, of the types used in artificial weathering chambers, to control exposure conditions produced by different lamps of the same type used simultaneously or successively. It may be used to compare the performance of different types of lamps provided that the spectral distributions of the lamps are not grossly dissimilar.

In the preparation of this method, consideration has been given to discussions in ISO/TC 61 (of the International Organization for Standardization) and particularly SC 6 of methods of measurement for similar purposes. Compared with use of direct instrumental measurement, the use of relatively small robust and portable patches of film is particularly convenient for routine monitoring of radiation intensities or doses deployed in weathering test machines with turntable systems for supporting the test specimens or the lamp(s) and/or use in remote localities.

Compared with the use of blue wool standards in accordance with BS 1006-B01, the response of polysulphone film provides a measure of radiation exposure more relevant to the effects of exposure of plastics materials to UV light.

WARNING NOTE. This method does not necessarily detail all precautions necessary to comply with the Health and Safety at Work etc. Act 1974. Attention should be paid to any appropriate safety precautions and the method should be operated only by trained personnel. In particular, attention is drawn to the requirements of the Protection of Eyes Regulations 1974, SI 1681.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 6, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date of issue	Comments

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The following BSI references relate to the work on this standard:
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Contents

	Page
Foreword	Inside front cover
1 Scope	1
2 Definitions	1
3 Principle	1
4 Materials	1
5 Apparatus	1
6 Procedure	1
7 Calculation and expression of results	2
8 Test report	4
Appendix A Preparation of polysulphone film	6
Figure 1 — Spectral sensitivity of polysulphone film	5
Table 1 — Conversion of ΔA_i (330) to equivalent dose 305 nm radiation (d)	3
Table 2 — Factors to relate radiation doses at different temperatures	4
Publication referred to	Inside back cover

