

**Paints and varnishes - Drying tests - Part 5: Modified
Bandow-Wolff test (ISO 9117-5:2012)**

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NATIONAL FOREWORD

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English Version

Paints and varnishes - Drying tests - Part 5: Modified Bandow-Wolff test (ISO 9117-5:2012)

Peintures et vernis - Essais de séchage - Partie 5: Essai
Bandow-Wolff modifié (ISO 9117-5:2012)

Beschichtungsstoffe - Trocknungsprüfungen - Teil 5:
Abgewandeltes Bandow-Wolff-Verfahren (ISO 9117-5:2012)

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Foreword

This document (EN ISO 9117-5:2012) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2013, and conflicting national standards shall be withdrawn at the latest by February 2013.

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Endorsement notice

The text of ISO 9117-5:2012 has been approved by CEN as a EN ISO 9117-5:2012 without any modification.

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Introduction

With regard to drying stages 2 to 7 (see Table 1) defined in this part of ISO 9117, it should be noted that the drying of different coats applied to the same substrate does not proceed uniformly. The processes which take place during film formation in the case of physical drying or oxidative/reaction-controlled drying are so different that a clear distinction between grades is not possible. Therefore, when testing using this part of ISO 9117, it is possible that, within the range covered by drying stages 4 to 7, a higher drying stage might be reached before a lower drying stage. For this reason, a difference of one drying stage within this range does not necessarily mean a specific difference in drying speed. Elasto-plastic coatings might never reach drying stages 5 to 7. If the surface is tacky, it is also possible that the high drying stages will not be reached, although the surface appears completely dry. Generally, the visible changes involved in drying stages 4 and 6 (see Table 1) can be evaluated more exactly on glossy surfaces than on matt or structured surfaces.

The test described in this part of ISO 9117 should therefore be seen as a technological tool with relatively limited usefulness. The test (if used in connection with other test procedures) should, however, ensure that the interested parties can agree on a measure for the performance characteristic referred to as “drying speed”.

Paints and varnishes — Drying tests —

Part 5:

Modified Bandow-Wolff test

1 Scope

This part of ISO 9117 specifies a method for determining whether coatings, including those produced using multi-coat systems, have reached various stages of drying (see Table 1). Furthermore, it allows the drying speed to be assessed.

In the case of plastic coatings, it is only possible to determine to a limited extent whether drying stages 4 to 7 have been reached, as the elasto-plastic behaviour of these coatings cannot be evaluated on the basis of a temporary visible change in the coating surface.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1513, *Paints and varnishes — Examination and preparation of test samples*

ISO 1514, *Paints and varnishes — Standard panels for testing*

ISO 2808, *Paints and varnishes — Determination of film thickness*

ISO 3270, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing*

ISO 9117-3, *Paints and varnishes — Drying tests — Surface-drying test using ballotini*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

3 Apparatus

3.1 Small transparent glass spheres (ballotini), as specified in ISO 9117-3.

3.2 Brush, soft-haired.

3.3 Paper discs, diameter 26 mm, made of commercial typing paper with a mass per unit area of 60 g/m² to 80 g/m².

3.4 Rubber discs, diameter (22 ± 1) mm, thickness (5,0 ± 0,5) mm, hardness (50 ± 5) IRHD¹⁾.

3.5 Weights, of 20 g, 200 g, 2 kg and 20 kg.

3.6 Stopwatch.

1) International rubber hardness degrees (see ISO 48).