PD CEN/TS 927-9:2023

BSI Standards Publication

Paints and varnishes — Coating materials and coating systems for exterior wood

Part 9: Determination of pull-off strength

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee STI/28, Paint systems for non-metallic substrates.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Beschichtungsstoffe - Beschichtungsstoffe und Beschichtungssysteme für Holz im Außenbereich - Teil 9: Bestimmung der Abreißfestigkeit

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European foreword

This document (CEN/TS 927-9:2023) has been prepared by Technical Committee CEN/TC 139 “Paints and varnishes”, the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 927-9:2018.

CEN/TS 927-9:2023 includes the following significant technical changes with respect to CEN/TS 927-9:2018:

— the title has been modified.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

This document is one of two methods for assessing the resistance of the coating system to removal by external forces provided by either cross-cutting or direct pull-off, both methods carried out under wet conditions. Two existing ISO Standards (EN ISO 2409 and EN ISO 4624) specify similar test methods for dry substrates in general, but make no provision for wet conditions, where wood coatings are known to be particularly vulnerable. Both of the new methods take full account of the special nature of wood as a substrate in terms of the method of wetting and the selection of the substrate.

Most of the currently used exterior coating systems are characterized by their propensity to being penetrated by moisture both into and out of the wood. It might therefore be difficult to achieve a good adhesion of these coatings under high moisture conditions. In cases of an already damaged coating film or an increased presence of moisture in the boundary zone to the wood surface, even a short-term exposure to water can be sufficient to weaken the adhesion of a coating film either to the substrate or within the coating system. The described method is suitable for the testing of coatings for exterior wood or wood-based materials and applicable for testing the wet adhesion of a single coat or multi-coat system. In this test procedure the force, which is necessary to detach or pull-off the coating perpendicular to the substrate is measured.

Furthermore, the nature of fracture of the coating is assessed to validate or reject and assist in the interpretation of the result.

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