



NSAI
Standards

Irish Standard Recommendation
S.R. CEN/TS 927-8:2020

Paints and varnishes - Coating materials and coating systems for exterior wood - Part 8: Determination of the adhesion on wood after water exposure by a double-X-cut test

S.R. CEN/TS 927-8:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

CEN/TS 927-8:2020

Published:

2020-02-19

This document was published under the authority of the NSAI and comes into effect on:

2020-03-08

ICS number:

87.040

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

S.R. CEN/TS 927-8:2020 is the adopted Irish version of the European Document CEN/TS 927-8:2020, Paints and varnishes - Coating materials and coating systems for exterior wood - Part 8: Determination of the adhesion on wood after water exposure by a double-X-cut test

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 927-8

February 2020

ICS 87.040

English Version

Paints and varnishes - Coating materials and coating systems for exterior wood - Part 8: Determination of the adhesion on wood after water exposure by a double-X-cut test

Peintures et vernis - Produits de peinture et systèmes de peinture pour le bois en extérieur - Partie 8 : Détermination de l'adhésion sur le bois après une exposition à l'eau lors d'un essai avec double incision en X

Beschichtungsstoffe - Beschichtungsstoffe und Beschichtungssysteme für Holz im Außenbereich - Teil 8: Bestimmung der Haftfestigkeit auf Holz durch Doppel-Kreuzschnittprüfung nach Wasserbeanspruchung

This Technical Specification (CEN/TS) was approved by CEN on 21 October 2019 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

CEN/TS 927-8:2020 (E)

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Principle	5
5	Apparatus and materials	5
6	Samples	6
7	Procedure	6
7.1	Cleaning of test surface	6
7.2	Making a double-X-cut	6
7.3	Application and removal of the tape (dry conditions)	7
7.4	Application and removal of the tape after wetting (wet conditions)	7
8	Results	7
9	Test report	12
Annex A (normative) Requirements for field testing		14
Annex B (normative) Testing the tape - Determination of adhesive strength of tape on test surface		15
Bibliography		16

European foreword

This document (CEN/TS 927-8:2020) 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.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CEN/TS 927-8:2020 (E)

Introduction

This Technical Specification (CEN/TS 927-8) is one of two methods for assessing the resistance of a coating system to removal by external forces provided by either double-X-cutting or direct pull-off (CEN/TS 927-9). Two existing ISO Standards (EN ISO 2409 and EN ISO 4624) specify test methods for dry substrates in general, but make no provision for wet conditions, where wood coatings are known to be particularly vulnerable. Both CEN methods (CEN/TS 927-8 and CEN/TS 927-9) take into account the special nature of wood as a substrate because as well wet conditions as the selection of the substrate are considered.

The adhesion of a coating system to a wood substrate can be reduced by high moisture content particularly at the wood/coating interface. Water can access this interface either from the outside because the coating film itself is permeable or through film defects. Water can also come from the wood substrate, and thus reach the coating film from the rear. The described method is applicable for testing the adhesion of a coating system to wood or wood based substrates under both dry and wet conditions.

1 Scope

This document describes the method for assessing the resistance of paint coatings to separation from substrates when a double-X pattern is cut into the coating, penetrating through to the substrate and using a tape.

Where a measurement of adhesion is required, the method described in CEN/TS 927-9 can be used.

The double X-cut pattern has been especially designed for wood and wood like substrates to minimize the effects from the incisions and at the same time provide a coating segment enclosed by four cuts.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN ISO 2409, *Paints and varnishes — Cross-cut test (ISO 2409)*

EN ISO 4618, *Paints and varnishes — Terms and definitions (ISO 4618)*

CEN/TS 927-9, *Paints and varnishes — Coating materials and coating systems for exterior wood — Part 9: Determination of pull-off strength after water exposure*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 4618 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

film detachment

coating resistance to separation from a substrate or interface

4 Principle

A double-X-cut is made through the paint film onto the substrate. A piece of tape is attached to the surface and subsequently pulled off for the assessment of film detachment under dry conditions. After wetting of a fresh cut the same action results in the assessment of film detachment under wet conditions. The degree of film detachment is assessed according to a scale.

5 Apparatus and materials

5.1 Single blade cutting tool, according to EN ISO 2409.

5.2 Tape, with a width of 25 mm, an adhesive strength of 4 N to 6 N on the coating according to Annex A, not older than one year, stored according to the supplier's specifications.

A laboratory method to measure the adhesive strength of the tape on the coating surface is provided by EN ISO 29862:2019, method 1 (at (20 ± 2) °C and (65 ± 5) % RH).

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-