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Standards

Irish Standard  
I.S. EN 17418:2021

Two-component epoxy and polyurethane adhesives for on-site repair of cracked timber structures - Testing, requirements and repair strength verification

**I.S. EN 17418:2021**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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*This document is based on:*

EN 17418:2021

*Published:*

2021-03-24

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

2021-04-11

ICS number:

83.180

NOTE: If blank see CEN/CENELEC cover page

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## National Foreword

I.S. EN 17418:2021 is the adopted Irish version of the European Document EN 17418:2021, Two-component epoxy and polyurethane adhesives for on-site repair of cracked timber structures - Testing, requirements and repair strength verification

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 17418**

March 2021

ICS 83.180

English Version

**Two-component epoxy and polyurethane adhesives for  
on-site repair of cracked timber structures - Testing,  
requirements and repair strength verification**

Adhésifs bicomposants polyuréthanes et époxydiques  
pour la réparation sur site de structures en bois  
fissurées - Essais, exigences et vérification de la  
résistance des réparations

Zwei-Komponenten-Epoxid- und Zwei-Komponenten-  
Polyurethan-Klebstoffe zur Reparatur von  
beschädigten Holzbauteilen auf der Baustelle -  
Prüfung, Anforderungen und Nachweis der Reparatur-  
Festigkeit

This European Standard was approved by CEN on 8 February 2021.

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## **EN 17418:2021 (E)**

### **European foreword**

This document (EN 17418:2021) has been prepared by Technical Committee CEN/TC 193 “Adhesives”, the secretariat of which is held by UNE.

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of an identical text or by endorsement, at the latest by September 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

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.

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## 1 Scope

This document specifies test methods and requirements for two-component epoxy and polyurethane adhesives for on-site repair of cracks in timber structures made of strength graded structural timber with rectangular cross-section, structural finger-jointed timber, glued solid timber and glued laminated timber made of softwood species by injection of the repair adhesive with glue line thicknesses up to 8 mm. The adhesive can also be used to rehabilitate cracks in the area of joints made by nails, screws, dowel-type fasteners and dowels with threads. The adhesive can also be used to fill gaps between the faces of structural components. This document addresses exclusively adhesives which fulfil the requirements according to Clause 8.

NOTE There is no sufficient experience with adhesives which do not fulfil the requirements in 8.4.4.

This document also covers the repair of surface treated wood. It does not cover the repair of preservative treated wood, modified and stabilized wood with considerably reduced swelling and shrinkage properties, e.g. acetylated wood, heat treated wood and polymer impregnated wood.

The adhesive is intended for the repair of load bearing timber structures not subjected to temperatures more than 60 °C over a longer time in service classes 1 and 2 according to EN 1995-1-1 which are loaded predominantly static or non-fatigue quasi static, see EN 1990 and EN 1991-1-1. A verification of quality and bond line integrity of the on-site repair bonding is given in an informative Annex A.

## 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 302-1, *Adhesives for load-bearing timber structures — Test methods — Part 1: Determination of longitudinal tensile shear strength*

EN 302-2, *Adhesives for load-bearing timber structures — Test methods — Part 2: Determination of resistance to delamination*

EN 302-4, *Adhesives for load-bearing timber structures — Test methods — Part 4: Determination of the effects of wood shrinkage on the shear strength*

EN 302-6, *Adhesives for load-bearing timber structures — Test methods — Part 6: Determination of the minimum pressing time under referenced conditions*

EN 302-7, *Adhesives for load-bearing timber structures — Test methods — Part 7: Determination of the working life under referenced conditions*

EN 302-8, *Adhesives for load-bearing timber structures — Test methods — Part 8: Static load test of multiple bond line specimens in compression shear*

EN 383, *Timber Structures — Test methods — Determination of embedment strength and foundation values for dowel type fasteners*

EN 408, *Timber structures — Structural timber and glued laminated timber — Determination of some physical and mechanical properties*

EN 923, *Adhesives — Terms and definitions*

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