

# Structural adhesives — Determination of the pot life (working life) of multicomponent adhesives

ICS 83.180

---

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

## National foreword

This British Standard is the UK implementation of EN 14022:2010. It supersedes BS EN 14022:2003 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/52, Adhesives.

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

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

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2010  
© BSI 2010

ISBN 978 0 580 68327 5

### Amendments/corrigenda issued since publication

Date	Comments

EUROPEAN STANDARD

**EN 14022**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2010

ICS 83.180

Supersedes EN 14022:2003

English Version

## Structural Adhesives - Determination of the pot life (working life) of multi-component adhesives

Adhésifs structuraux - Détermination de la durée de vie en pot (délai d'utilisation) des adhésifs multicomposants

Strukturklebstoffe - Bestimmung der Topfzeit (Verarbeitungszeit) von Mehrkomponentenklebstoffen

This European Standard was approved by CEN on 28 December 2009.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

© 2010 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 14022:2010: E



EUROPEAN STANDARD

**EN 14022**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2010

ICS 83.180

Supersedes EN 14022:2003

English Version

## Structural Adhesives - Determination of the pot life (working life) of multi-component adhesives

Adhésifs structuraux - Détermination de la durée de vie en pot (délai d'utilisation) des adhésifs multicomposants

Strukturklebstoffe - Bestimmung der Topfzeit (Verarbeitungszeit) von Mehrkomponentenklebstoffen

This European Standard was approved by CEN on 28 December 2009.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

© 2010 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 14022:2010: E

## Foreword

This document (EN 14022:2010) has been prepared by Technical Committee CEN/TC 193 “Adhesives”, the secretariat of which is held by AENOR.

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 August 2010, and conflicting national standards shall be withdrawn at the latest by August 2010.

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

This document supersedes EN 14022:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

NOTE EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

**NOTE** EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

**NOTE** EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

NOTE EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

NOTE EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

**3.1**  
**pot life**  
**working life**  
period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

**NOTE** EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

NOTE EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

NOTE EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed



## 1 Scope

This European Standard specifies means of determining in appropriate ways the variable property known alternatively as useable working life and pot life.

This European Standard specifies five methods for the determination of the time available for use, each of which is related to specific circumstances; particularly important being the rheology of the adhesive concerned and its rate of reaction.

This European Standard can also be used for assessing non-structural adhesives.

NOTE EN 302-7 could also be used for the determination of working life of adhesives for load-bearing timber structures.

Because of the different properties of the individual multi-component systems, like rheology or viscosity, respectively velocity of hardening, etc., not all methods can be applied to each multi-component system with the same suitability.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

**ENVIRONMENTAL STATEMENT —** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 1067, *Adhesives — Examination and preparation of samples for testing*

EN 12092:2001, *Adhesives — Determination of viscosity*

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

## 3 Terms and definitions

For the purposes of this document, the terms and the definitions given in EN 923:2005 and the following apply.

### 3.1 pot life

### working life

period of time during which a multi-component adhesive can be used after its component parts have been mixed





BSI  
British Standards Institution  
11, South Molton Street  
London W1K 7AF  
Tel: 020 8996 9001  
Fax: 020 8996 7001  
Email: bs.enquiries@bsi.org.uk  
Website: www.bsi.org.uk