

# SVENSK STANDARD

## SS-EN 1965-1:2011

Fastställt/Approved: 2011-05-19  
Publicerad/Published: 2011-06-01  
Utgåva/Edition: 2  
Språk/Language: engelska/English  
ICS: 77.060; 83.180; 83.182

---

### **Konstruktionslim – Korrosion – Del 1: Bestämning och klassificering gällande korrosion av koppersubstrat**

### **Structural adhesives – Corrosion – Part 1: Determination and classification of corrosion to a copper substrate**

This preview is downloaded from [www.sis.se](http://www.sis.se). Buy the entire standard via <https://www.sis.se/std-80464>

# Standarder får världen att fungera

*SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.*

## Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

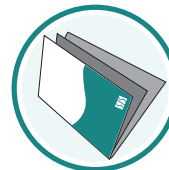
## Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

## Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

**Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på [www.sis.se](http://www.sis.se) eller ta kontakt med oss på tel 08-555 523 00.**



# Standards make the world go round

*SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.*

## Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

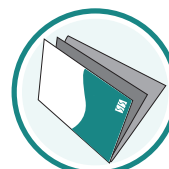
## Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

## Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

**If you want to know more about SIS, or how standards can streamline your organisation, please visit [www.sis.se](http://www.sis.se) or contact us on phone +46 (0)8-555 523 00**



Europastandarden EN 1965-1:2011 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 1965-1:2011.

Denna standard ersätter SS-EN 1965-1, utgåva 1.

The European Standard EN 1965-1:2011 has the status of a Swedish Standard. This document contains the official version of EN 1965-1:2011.

This standard supersedes the Swedish Standard SS-EN 1965-1, edition 1.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

*Uppllysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna uppllysningar om svensk och utländsk standard.*

*Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.*

Denna standard är framtagen av kommittén för Lim och limningsteknik, SIS/TK 162.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på [www.sis.se](http://www.sis.se) - där hittar du mer information.



EUROPEAN STANDARD

**EN 1965-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2011

ICS 77.060; 83.180

Supersedes EN 1965-1:2001

English Version

## Structural adhesives - Corrosion - Part 1: Determination and classification of corrosion to a copper substrate

Adhésifs structuraux - Corrosion - Partie 1: Détermination et classification de la corrosion d'un substrat en cuivre

Strukturklebstoffe - Korrosion - Teil 1: Bestimmung und Klassifikation der Korrosion eines Kupfermaterials

This European Standard was approved by CEN on 10 March 2011.

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-CENELEC 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-CENELEC 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

<b>Contents</b>		<b>Page</b>
Foreword.....		3
1	Scope .....	4
2	Normative references .....	4
3	Terms and definitions .....	4
4	Principle.....	4
5	Products and materials .....	4
6	Procedure .....	5
6.1	General.....	5
6.2	Preparation of the copper substrate.....	5
6.3	Determination.....	5
7	Discolouration/corrosion .....	6
8	Report .....	6

## Foreword

This document (EN 1965-1:2011) 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 November 2011, and conflicting national standards shall be withdrawn at the latest by November 2011.

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 1965-1:2001.

**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.

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 describes a method to determine the ability of a liquid adhesive to corrode a copper substrate under heat ageing conditions. Temperatures and ageing periods are chosen to ensure the maximum differentiation between the corrosivity of different adhesives and are not intended to represent any particular service condition.

## 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+A1:2008, *Adhesives — Terms and definitions*

ISO 6958, *Wrought copper and copper alloys — Drawn rectangular bars — Dimensions and form tolerances*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923:2005+A1:2008 and the following apply.

### 3.1 corrosion

destructive attack on metals which can be chemical or electrochemical in nature

NOTE The described method measures essentially only the chemical attack. The electrochemical contribution is eliminated as far as possible by ensuring that there is no electrolyte and that the copper substrate is, as far as practicable, free from metallic impurities which can result in the formation of a galvanic cell.

## 4 Principle

An abraded and polished copper substrate is coated with a thin film of the liquid adhesive and then aged for 24 h in dry heat at 50 °C or 100 °C. Following this the surface is examined and the extent of tarnishing and/or corrosion on the basis of discolouration.

## 5 Products and materials

### 5.1 Solvent.

Any sulfur free, and water free, hydrocarbon based solvent, which has been shown to cause no discolouration of the abraded copper substrate at 50 °C is suitable. The solvent should be able to dissolve the uncured adhesive

### 5.2 Copper substrate, plate.

Recommended cross section 12 mm × 2 mm, ISO 6958 E-Cu F30, produced by electrolysis.