



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 4895:2014

# Plastics - Liquid epoxy resins - Determination of tendency to crystallize (ISO 4895:2014)

**I.S. EN ISO 4895:2014**

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

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English Version

## Plastics - Liquid epoxy resins - Determination of tendency to crystallize (ISO 4895:2014)

Plastiques - Résines époxydes liquides - Détermination de la tendance à la cristallisation (ISO 4895:2014)

Kunststoffe - Flüssige Epoxidharze - Bestimmung der Kristallisationsneigung (ISO 4895:2014)

This European Standard was approved by CEN on 28 June 2014.

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**EN ISO 4895:2014 (E)**

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## **Foreword**

This document (EN ISO 4895:2014) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by January 2015, and conflicting national standards shall be withdrawn at the latest by January 2015.

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 ISO 4895:1999.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### **Endorsement notice**

The text of ISO 4895:2014 has been approved by CEN as EN ISO 4895:2014 without any modification.

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# INTERNATIONAL STANDARD

# ISO 4895

Third edition  
2014-07-15

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## **Plastics — Liquid epoxy resins — Determination of tendency to crystallize**

*Plastiques — Résines époxydes liquides — Détermination de la  
tendance à la cristallisation*



Reference number  
ISO 4895:2014(E)

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**ISO 4895:2014(E)**



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## ISO 4895:2014(E)

### Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

This third edition cancels and replaces the second edition (ISO 4895:1997), which has been technically revised.

## **Introduction**

The tendency of liquid epoxy resins to crystallize varies depending on factors such as basic composition, purity, additives, homogeneity and water content, in addition to external factors such as storage history and ambient temperature.

As it is rather difficult to indicate the tendency quantitatively by observation and comparison, the tendency is therefore to express the results by observing, at intervals, the changes in fluidity and appearance of samples.



# Plastics — Liquid epoxy resins — Determination of tendency to crystallize

**SAFETY STATEMENT** — Persons using this document should be familiar with normal laboratory practice, if applicable. This document does not purport to address all of the safety concerns, 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 requirements.

## 1 Scope

This International Standard specifies a method for determining the tendency of liquid epoxy resins to crystallize. The tendency to crystallize is determined by observing, at specified time intervals, changes in fluidity and the onset of crystallization.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6353-2:1983, *Reagents for chemical analysis — Part 2: Specifications — First series*

ISO 6353-3:1987, *Reagents for chemical analysis — Part 3: Specifications — Second series*

## 3 Principle

Calcium carbonate powder is mixed with the liquid epoxy resin dissolved in ethanol. The mixture is kept at a specified low temperature and observed at specified time intervals to compare the changes in fluidity and crystallization.

## 4 Reagents

**4.1 Calcium carbonate**, as specified in ISO 6353-3:1987, R 53.

**4.2 Ethanol**, as specified in ISO 6353-2:1983, R 11.

## 5 Apparatus

**5.1 Refrigerator or cold enclosure**, maintained at  $(10 \pm 2)$  °C.

**5.2 Glass test tube**, of capacity approximately 100 ml, 40 mm in diameter and 80 mm in height, with a polyethylene-covered stopper.

**5.3 Glass rod**, of hard glass, approximately 10 mm in diameter.

**5.4 Oven**.

**5.5 Analytical balance**, accurate to 0,01g.

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