

# SVENSK STANDARD

## SS-EN 12933:2015



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### **Processkemikalier för beredning av dricksvatten – Kemikalier för nödfallsbruk – Triklorisocyansyra**

**Chemicals used for treatment of water intended for human  
consumption – Chemicals for emergency use –  
Trichloroisocyanuric acid**

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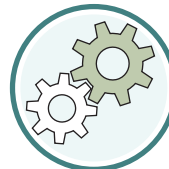
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The European Standard EN 12933:2015 has the status of a Swedish Standard. This document contains the official English version of EN 12933:2015.

This standard supersedes the Swedish Standard SS-EN 12933:2008, edition 2.

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EUROPEAN STANDARD

**EN 12933**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2015

ICS 71.100.80

Supersedes EN 12933:2008

English Version

**Chemicals used for treatment of water intended for human  
consumption - Chemicals for emergency use -  
Trichloroisocyanuric acid**

Produits chimiques utilisés pour le traitement de l'eau  
destinée à la consommation humaine - Produits chimiques  
utilisés en cas d'urgence - Acide trichloroisocyanurique

Produkte zur Aufbereitung von Wasser für den  
menschlichen Gebrauch - Produkte für den Notfall -  
Trichlorisocyanursäure

This European Standard was approved by CEN on 20 December 2014.

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.

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

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

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## Foreword

This document (EN 12933:2015) has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

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 2015, and conflicting national standards shall be withdrawn at the latest by September 2015.

This document supersedes EN 12933:2008.

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.

Significant technical difference between this edition and EN 12933:2008 is as follows:

- a) deletion of reference to EU Directive 67/548/EEC of June 27, 1967 in order to take into account the latest Regulation in force (see [2]);
- b) 6.2 – updating of risk and safety labelling according to EU Regulation [2] and its latest Adaptations to Technical Progress.

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.



## **Introduction**

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this European Standard:

- a) this European Standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA;
- b) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

**NOTE** Conformity with this European Standard does not confer or imply acceptance or approval of the product in any of the Member States of the EU or EFTA. The use of the product covered by this European Standard is subject to regulation or control by National Authorities.

## 1 Scope

This European Standard is applicable to trichloroisocyanuric acid used for emergency treatment of water intended for human consumption. It describes the characteristics of trichloroisocyanuric acid and specifies the requirements and the corresponding test methods for trichloroisocyanuric acid. It gives information on its use in water treatment. It also determines the rules relating to safe handling and use of trichloroisocyanuric acid (see Annex B).

## 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.

EN 1233, *Water quality - Determination of chromium - Atomic absorption spectrometric methods*

EN ISO 12846, *Water quality - Determination of mercury - Method using atomic absorption spectrometry (AAS) with and without enrichment (ISO 12846)*

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696)*

ISO 3165, *Sampling of chemical products for industrial use — Safety in sampling*

ISO 6206, *Chemical products for industrial use — Sampling — Vocabulary*

ISO 8213, *Chemical products for industrial use — Sampling techniques — Solid chemical products in the form of particles varying from powders to coarse lumps*

ISO 8288:1986, *Water quality — Determination of cobalt, nickel, copper, zinc, cadmium and lead — Flame atomic absorption spectrometric methods*

## 3 Description

### 3.1 Identification

#### 3.1.1 Chemical name

1,3,5-trichloro - 1,3,5 triazine - 2,4,6-trione.

#### 3.1.2 Synonym or common names

Trichloroisocyanuric acid, TCCA.

Symclosene.

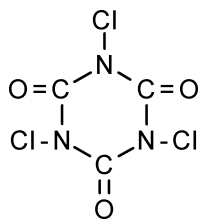
#### 3.1.3 Relative molecular mass

232,42.

#### 3.1.4 Empirical formula

$C_3N_3O_3Cl_3$ .

### 3.1.5 Chemical formula



### 3.1.6 CAS Registry Number <sup>1)</sup>

87-90-01.

### 3.1.7 EINECS reference <sup>2)</sup>

201-782-8.

## 3.2 Commercial form

The product is available in various forms: powder, granules or tablets.

## 3.3 Physical properties

### 3.3.1 Appearance and odour

The product is white free-flowing powder, granules or tablets with chlorinous odour.

### 3.3.2 Density

The bulk density of the product is approximately:

- 1 g/cm<sup>3</sup>;
- 1,2 g/cm<sup>3</sup> for powder and granules;
- 1,9 g/cm<sup>3</sup> for tablets.

### 3.3.3 Solubility in water

The solubility of the product in water is 12 g/l at 25 °C.

### 3.3.4 Vapour pressure

Not applicable.

### 3.3.5 Boiling point at 100 kPa <sup>3)</sup>

Not applicable, the product decomposes before fusion.

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1) Chemical Abstracts Service Registry Number.

2) European Inventory of Existing Commercial Chemical Substances.

3) 100 kPa = 1 bar