

**Masinaid tööstuslike detailide pindade
puhastamiseks ja eeltöötlemiseks vedelike või
aurude abil. Osa 2: Veepõhiseid puhastusvedelikke
kasutatavate masinate ohutus KONSOLIDEERITUD
TEKST**

Machines for surface cleaning and pre-treatment of
industrial items using liquids or vapours - Part 2: Safety
of machines using water based cleaning liquids
CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12921-2:2005+A1:2009 sisaldab Euroopa standardi EN 12921-2:2005+A1:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 29.01.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 26.11.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12921-2:2005+A1:2009 consists of the English text of the European standard EN 12921-2:2005+A1:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 29.01.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 26.11.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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Võtmesõnad: aqueous, cleaning, cleaning equipment, hazards, pretreatment

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Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
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English Version

Machines for surface cleaning and pre-treatment of industrial items using liquids or vapours - Part 2: Safety of machines using water based cleaning liquids

Machines de nettoyage et de pré-traitement de pièces industrielles utilisant des liquides ou des vapeurs - Partie 2: Sécurité des machines utilisant des liquides de nettoyage à base aqueuse

Maschinen zur Oberflächenreinigung und -vorbehandlung von industriellen Produkten mittels Flüssigkeiten oder Dampfphasen - Teil 2: Anlagen, in denen wässrige Reinigungsmittel verwendet werden

This European Standard was approved by CEN on 25 March 2008 and includes Amendment 1 approved by CEN on 23 October 2008.

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, 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.



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Foreword

This document (EN 12921-2:2005+A1:2008) has been prepared by Technical Committee CEN /TC 271, "Surface treatment equipment — Safety", the secretariat of which is held by DIN.

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 May 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-10-23.

This document supersedes EN 12921-2:2005.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{A_1}$ $\boxed{A_1}$.

$\boxed{A_1}$ 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 EC Directive(s).

For relationship with EC Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. $\boxed{A_1}$

This standard is part of a series of standards in the area of safety for development and construction of machines for surface cleaning and pre-treatment of industrial items using liquids or vapours.

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, 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.

Introduction

This European Standard is a type C standard as stated in EN ISO 12100.

This European Standard contains additional safety requirements to and/or deviations from EN 12921-1.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this standard.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

The EN 12921 series includes the following parts:

- Part 1: Common safety requirements
- Part 2: Safety of machines using water based cleaning liquids
- Part 3: Safety of machines using flammable cleaning liquids
- Part 4: Safety of machines using halogenated solvents.

1 Scope

This European Standard deals only with the significant hazards of machines for surface cleaning and pre-treatment (in the following called "cleaning machines") of industrial items using water based cleaning liquids in the mode of suspension, solution or dispersion of compounds or substances in water applied by immersion and/or spraying in one or more stages.

This European Standard **A1** applies **A1** in combination with EN 12921-1. Both parts together cover all significant hazards relevant for cleaning machines for industrial items using liquids or vapours, when they are used as intended and under the conditions foreseen by the manufacturer (see clause 4). The specific requirements specified in this standard take precedence over the respective requirements in EN 12921-1. This standard should be applied together with EN 12921-3 in case of release of flammable vapours from water based cleaning liquids.

This European Standard **A1** applies **A1** together with EN 12921-3 and prEN 12921-4 in case of use of water based cleaning liquids of which evaporating can lead to hazards caused by explosive atmospheres. Water based cleaning liquids containing a quantity of halogenated solvents exceeding 2 % of the volume are considered hazardous with respect to the creation of a potentially explosive atmosphere.

This European Standard does not apply to machinery and related equipment excluded from the scope of EN 12921-1.

This European Standard does not apply to cleaning machines for industrial items using water based cleaning liquids which are manufactured before the publication of this standard by CEN.

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 746-1, *Industrial thermoprocessing equipment — Part 1: Common safety requirements for industrial thermoprocessing equipment*

EN 746-2, *Industrial thermoprocessing equipment — Part 2: Safety requirements for combustion and fuel handling systems*

EN 1127-1, *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology*

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

EN 12921-1:2004, *Machines for surface cleaning and pre-treatment of industrial items using liquids or vapours — Part 1: common safety requirements*

EN 12921-3:2004, *Machines for surface cleaning and pre-treatment of industrial items using liquids or vapours — Part 3: safety of machines using flammable cleaning liquids*

EN 60204-1:1997, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:1997)*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

EN ISO 12100-1:2003; *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*