



**SLOVENSKI STANDARD
SIST EN ISO 22291:2022**

01-julij-2022

Varnostne zahteve za mokre postopke netkalskih strojev (ISO 22291:2022)

Safety requirements for wetlaid-nonwoven machinery (ISO 22291:2022)

Sicherheitsanforderungen an Nassvliesmaschinen (ISO 22291:2022)

Exigences de sécurité pour les machines de production de nontissé par voie humide
(ISO 22291:2022)

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Safety requirements for wetlaid-nonwoven machinery (ISO 22291:2022)

Exigences de sécurité pour les machines de production
de non tissé par voie humide (ISO 22291:2022)

Sicherheitsanforderungen an Nassvliesmaschinen (ISO
22291:2022)

This European Standard was approved by CEN on 30 December 2021.

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 22291:2022) has been prepared by Technical Committee ISO/TC 72 "Textile machinery and accessories" in collaboration with Technical Committee CEN/TC 214 "Textile machinery and accessories" the secretariat of which is held by SNV.

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of an identical text or by endorsement, at the latest by September 2022, and conflicting national standards shall be withdrawn at the latest by September 2022.

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

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

For the relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 22291:2022 has been approved by CEN as EN ISO 22291:2022 without any modification.

Annex ZA (informative)

Relationship between this European Standard and the essential requirements of Directive 2006/42/EC, aimed to be covered

This European Standard has been prepared under a Commission's standardization request "M/396 Mandate to CEN and CENELEC for Standardisation in the field of machinery" to provide one voluntary means of conforming to essential requirements of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on Machinery, and amending Directive 95/16/EC (recast).

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this document given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2006/42/EC

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/subclause(s) of this EN	Remarks / Notes
1.1.2 (a)	5.1; 5.3	
1.1.2 (d)	5.1	
1.1.2 (e)	5.1; 5.3; 5.19	
1.1.3 Materials and products	—	not covered
1.1.4 Lighting	5.23	
1.1.6 Ergonomics	5.24; 5.34; 5.35	
1.1.7. Operating positions	—	not covered
1.2.1 Safety and reliability of control systems	5.12	
1.2.2 Control devices	5.7; 5.12	
1.2.3 Starting	5.10; 5.11; 5.16; 5.19; 5.29.2	
1.2.4.1 Normal stop	5.10; 5.11; 5.16; 5.19; 5.29.2	
1.2.4.3 Emergency stop	5.8; 5.10	
1.2.4.4 Assembly of machinery	5.8	
1.2.5 Selection of control or operating modes	5.16	
1.2.6 Failure of the power supply	5.9; 5.29.2	
1.3.2. Risk of break-up during operation	—	not covered
1.3.3. Risks due to falling or ejected objects	—	not covered
1.3.4. Risks due to surfaces, edges	5.33; 5.37, Clause A.3	

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/subclause(s) of this EN	Remarks / Notes
or angles		
1.3.7 Risks related to moving parts	5.16; 5.17; 5.19, 5.29.2	
1.3.8 Choice of protection against risks arising from moving parts	5.16; 5.17; 5.19; 5.29; 5.30	
1.3.8.1 Moving transmission parts	5.10; 5.30.2	
1.3.8.2 Moving parts involved in the process	5.32; 5.33	
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1.4.1 General requirements	5.3; Clause A.3	
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1.4.2.2 Interlocking movable guards	5.3; 5.12; 5.30; 5.31; 6.1; 6.2; 6.3; 6.5; 6.6; Clause A.2	
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The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/subclause(s) of this EN	Remarks / Notes
1.6.4 Operator intervention	5.5; 5.36	
1.6.5 Cleaning of internal parts	5.5	
1.7.1 Information and warnings on the machinery	5.7; 5.12; 5.21; 5.24; 8.1	
1.7.1.1 Information and information devices	5.9; 6.5.3; 8.1; 8.2	
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WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL
STANDARD

ISO
22291

First edition
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**Safety requirements for wetlaid-
nonwoven machinery**

*Exigences de sécurité pour les machines de production de non tissé
par voie humide*

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ISO 22291:2022(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 72, *Textile machinery and accessories*, Subcommittee SC 8, *Safety requirements for textile machinery*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 214, *Textile machinery and accessories*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document was prepared simultaneously by ISO/TC 72 and CEN/TC 214, and adopted under the Vienna Agreement in order to obtain identical standards on technical safety requirements for the design and construction of wetlaid-nonwoven machinery.

This document is a type-C standard as stated in ISO 12100.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- machine designers;
- systems integrators;
- health and safety bodies (regulators, accident prevention organisations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e.g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document. When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

For machines or machine equipment not dealt with in this document, the designer performs a risk assessment according to ISO 12100 and provides means for reducing the risk from significant hazards. These risk reduction measures that need to be identified by the designer/manufacturer of the machinery by risk assessment are outside the scope of this document.

This document contains a summary of general safety requirements and/or protective/risk reduction measures for frequently occurring hazards of wetlaid-nonwoven machinery (see [Clause 5](#)) which apply whenever referred to in this document.

Specific hazards and corresponding specific safety requirements and/or protective/risk reduction measures for certain machine elements (e.g. winders) and their combination of wetlaid-nonwoven machines are also described (see [Clause 6](#)).