



SLOVENSKI STANDARD
SIST ENV 12940:2000
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Footwear manufacturing wastes - Waste classification and management

Footwear manufacturing wastes - Waste classification and management

Abfälle bei der Schuhproduktion - Abfallklassifizierung und -management

Déchets de fabrication de chaussures - Classification et gestion des déchets

Ta slovenski standard je istoveten z: ENV 12940:1999

[SIST ENV 12940:2000](https://standards.iteh.ai/catalog/standards/sist/015e3578-e95a-4bd4-8188-030a100cd2fc/sist-env-12940-2000)

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ICS:

13.030.01	Odpadki na splošno	Wastes in general
61.060	Obuvala	Footwear

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EUROPEAN PRESTANDARD
PRÉNORME EUROPÉENNE
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English version

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This European Prestandard (ENV) was approved by CEN on 29 May 1999 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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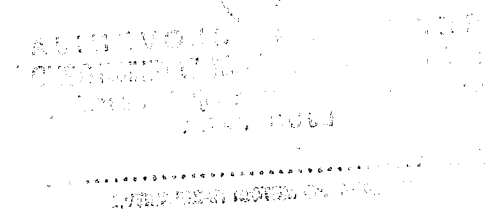
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Contents	Page
Foreword.....	3
Introduction	3
1 Scope.....	3
2 Normative references.....	4
3 Definitions	4
4 Requirements.....	4
5 Procedure	7
6 Calculation methods.....	7
7 Expression of results.....	8
8 Test report.....	8
Annex A (informative) Definitions applicable to this ENV given by the EU legislation	9

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Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 309 "Footwear", the secretariat of which is held by AENOR.

It has been approved by CEN members at the 11th meeting of CEN/TC 309 (Madrid, 1999-04-29).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Waste disposal is increasingly regulated within the European Union. At the same time, waste management costs are increasing. With regards to waste management, the footwear industry needs

- guidelines in order to better anticipate future regulations and deal with them effectively,
- a tool in order to estimate the effectiveness of the waste management.

This standard incorporates such a tool, designed specifically for the footwear industry.

In order to improve the waste management, the footwear manufacturer should perform the following tasks:

- reduce the quantity of waste,
- reuse the waste,
- recycle the waste,
- incinerate and recover energy from the waste,
- treat the waste.

1 Scope

This experimental standard specifies the process steps which are involved in the generation of the waste from footwear manufacture and the usual waste management practices. It also establishes a European list of the usual wastes generated during the footwear manufacturing process.

It can be applied to one specific product, a specific group of products, one specific production technology within the factory or to the whole production of a company.

NOTE The nature of such wastes produced will depend on manufacturing processes, the type of shoe and the materials used.

The tool used to evaluate the effectiveness of the waste management is:

- established directly from the production process or waste generated,
- calculated for a specific product, a specific group of products or a specific production technology which shall be defined or the whole production of the company.

2 Normative references

None

3 Definitions

For the purposes of this standard, the following definitions apply:

NOTE Attention is drawn to the fact that the terms *waste* and *waste management* are defined in EU Directive 75/442/EEC modified by the EU Directive 91/156/EEC. The term *packaging waste* is defined in EU Directive 94/62/EEC. The term *landfill* is defined in the Directive Proposal 98/C126/09. (See Annex A).

3.1

process waste

waste directly linked with the footwear manufacturing process

3.2

maintenance waste

waste generated in the factories from maintenance processes

3.3

waste management practice

a technology, a specific treatment or a way of management applied to the waste (for example reducing, recycling, incineration ...)

[SIST ENV 12940:2000](#)

NOTE These practices are listed in table 3: [catalog/standards/sist/015e3578-e95a-4bd4-8188-030a100cd2fc/sist-env-12940-2000](#)

3.4

test period

a consecutive period of production about which all the required data are collected

3.5

waste quantity

for one type of waste, quantity of waste generated during a given test period when manufacturing a specified final product or group of final products

3.6

controlled landfill

landfill which emissions to the environment are controlled

3.7

special destruction treatment

destruction treatment which is not incineration, recycling nor landfilling

4 Requirements

4.1 Process steps

The footwear manufacturing process steps to take into account to quantify the wastes are given in table 1.

Table 1 – Footwear manufacturing steps to be taken into account

Parts of the process	Steps to take into account
Storage	storage of raw materials
Design and development	cutting of materials unused samples
Upper manufacture	cutting of upper material cutting of lining material skiving cementing / stitching
Manufacture of other components	cutting of insole material cutting of insock material cutting of sole material sole / heel manufacture or preparation adhesive priming of soles and heels
Assembly	all steps of assembly
Finishing	all steps of finishing
Storage of finished product	warehouse
Maintenance of production equipment	tasks generating wastes

4.2 Waste classification list

The wastes to be taken into account shall be, at least, those specified in table 2.

Table 2 – Waste classification list

Waste codes	List of possible wastes
	Process wastes
	Upper material cutting waste
	Insole material cutting waste
	Sole material cutting waste
	Injection moulding wastes
	Other
	Dust or sludge (roughing)
	Trimming
	Other process wastes
080102	Rest of inks, varnishes ... (non halogenated solvent based)
080103	Rest of inks, varnishes ... (water based)
080402	Rest of adhesives (non halogenated solvent based)
080403	Rest of adhesives (water based)
140103	Used solvents (alone or mixed)
200301	Sub-standard shoes
	Packaging wastes
150101	Cardboard packaging: shoe boxes, packing cases, sample boxes, centre tubes from textile rolls
150102	Plastic cones and bobbins
"	Plastic bags and films
"	Jars, tins & drums (plastic) cleaned
"	Jars, tins & drums (plastic) containing < 3% product residue
"	Jars, tins & drums (plastic) containing > 3% product residue
150103	Wooden palettes
150104	Jars, tins & drums (metal) cleaned
"	Jars, tins & drums (metal) containing < 3% product residue
"	Jars, tins & drums (metal) containing > 3% product residue
"	Other metallic packaging waste (aluminium center tubes for textile rolls ...)
	Other wastes (maintenance...)
130100	Hydraulic oil
130200	Motor oil
150102	Damaged or obsolete lasts (plastic)
150201	Used air filters
160205	Out of use equipment
200101	Paper: office, computer
200106	Damaged or obsolete knives, damaged or obsolete lasts (aluminium)
200108	Canteen waste
200301	Wastes similar to domestic waste (drinking cans, workshop sweepings ...)
<p>NOTE In the EU legislative documents, no waste classification is specifically created for the footwear industry: Some wastes from the footwear industry are not listed in the European Waste Catalogue ¹. CEN/TC 309 will reconsider the coding in this table when the European Waste Catalogue includes wastes regarding specifically the footwear industry.</p>	

¹ Decision of the Commission of the European Communities n° 94/3/EC

4.3 Waste management practices

The practices listed in table 3 are usual waste management practices to the footwear industry.

Table 3 – Usual waste management practices

Waste management practices	Code
Reuse as it is	A
Recycle within or outside the company (specify)	B
Incinerate with energy recovery	C
Special destruction treatment ¹⁾ (specify)	D
Controlled landfill	E
Incinerate without energy recovery	F
Others ²⁾ (specify)	G
¹⁾ For example: chemical destruction, biological destruction	
²⁾ For example: sell as raw material	

5 Procedure

The steps shall be the following:

- Waste quantification: calculate the quantity of the wastes generated during the test period (following the list presented in table 2). For each waste, calculate the ratio quantity / number of pairs produced during the test period in kg/1000 pairs,
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- Determine the average mass of the pair of shoe which is representative of the specified final product, group of final products or the whole production being analysed during the test period,
- Use of waste management practices: for each waste, calculate the part treated according to each waste management practices given in table 3. Fill the table like the table 4,
- Provide the results: if practices coded « B », « D » or « G » are used, specify in technical terms which practice is followed.

6 Calculation methods

6.1 Waste quantity

The wastes included are those generated when producing a defined part of the production of a factory. For example, it can be one type of shoe, one production technology or it could be the whole production.

All waste quantities, even liquid wastes, are converted into kilograms. Then the ratio « kg of waste/1000 pairs » shall be calculated.

The test period shall be maximum 12 months.