



SLOVENSKI STANDARD

SIST EN 12654-3:2000

01-maj-2000

Steklene tkanine - Preje - 3. del: Splošne zahteve za splošno uporabo

Textile glass - Yarns - Part 3: General requirements for general applications

Textilglas - Garne - Teil 3: Allgemeine Anforderungen für allgemeine Anwendungen

Verre textile - Fils - Partie 3: Exigences générales pour applications générales

Ta slovenski standard je istoveten z: EN 12654-3:1998

[SIST EN 12654-3:2000](https://standards.iteh.ai/catalog/standards/sist/cc1d809e-94ae-4edf-9fa1-002a3118f138/sist-en-12654-3-2000)

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ICS:

59.100.10 Materiali iz steklenih vlaken Textile glass materials

SIST EN 12654-3:2000

en

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EUROPEAN STANDARD

EN 12654-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 1998

ICS 59.100.10

Descriptors: textile glass, textile glass yarns, specifications, utilization, physical properties, visual examination, appearance, defects, acceptability

English version

Textile glass - Yarns - Part 3: General requirements for general applications

Verre textile - Fils - Partie 3: Exigences générales pour applications générales

Textilglas - Garne - Teil 3: Allgemeine Anforderungen für allgemeine Anwendungen

This European Standard was approved by CEN on 30 October 1998.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 1999, and conflicting national standards shall be withdrawn at the latest by May 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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0 Introduction

This Standard is one part of EN 12654 which is structured as follows :

Textile glass - Yarns - Part 1 : Designation ;

Textile glass - Yarns - Part 2 : Methods of test and general specifications ;

Textile glass - Yarns - Part 3: General requirements for general applications.

1 Scope

This European Standard provides the requirements for textile glass yarns intended to general purpose applications.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 12654-2 : 1998, *Textile glass - Yarns - Part 2 : Methods of test and general specifications*

EN ISO 1889, *Reinforcement yarns - Determination of linear density (ISO 1889:1997).*

EN ISO 1890, *Reinforcement yarns - Determination of twist (ISO 1890:1997).*

EN ISO 3344, *Reinforcement products - Determination of moisture content (ISO 3344:1997).*

ISO 1887, *Textile glass - Determination of the combustible matter content.*

ISO 1888, *Textile glass – Staple fibres or filaments - Determination of average diameter.*

ISO 3341, *Textile glass - Yarns - Determination of breaking force and breaking elongation.*

3 List of current products

3.1 Single yarns

Table 1: Single yarns

Type of glass	Structure of basic filament	Diameter of the filaments (μm)	Linear density (tex)	Single yarn structure		Type					
				Direction of twist	Number of turns/metre (2)						
E	C	3,5	33,0	Z or S	20 to 52	Textile or Plastic					
		4,5	34,0 68,0								
		5	2,8 5,5 11,0 22,0								
		6	34,0 68,0 136,0								
		7	22,0 34,0 44,0								
		9	34,0 68,0 110,0 136,0 204,0 272,0								
		10	340,0								
		11	51,0 136,0 204,0 340,0 480,0 (1)								
		12	340,0								
		13	136,0 272,0 300,0 408,0 544,0 (1)								
		D	C				10 14	34,0 68,0	Z	40 40	Plastic Plastic
		R or S	C				9	34,0 68,0	Z	40	Textile or Plastic

(1) And multiples there of.
(2) In accordance with EN ISO 1890 (tangential take off method).

The list above given will be revised at each revision of the standard. Other products may make reference to this standard for as many of their properties as conform to the limits given in clause 4.

3.2 Folded yarns

Table 2: Folded yarns

Type of glass	Structure of basic filament	Diameter of the filaments (μm)	Linear density (tex)	Singles yarn twist direction	Folded yarn structure			Type of size
					N° of singles combined	Direction of folding twist	N° t/m of folded yarn (1)	
E	C	5	2,8	Z	X2	S	150 to 190	Textile
			5,5					
		11,0						
		6	34,0		X2 or X3		100	Textile or Plastic
			68,0					
		136,0						
7	22,0	or	to	Plastic				
9	34,0							
	68,0	X4 or X5	150					
136,0								
11	102,0							
	136,0							
	136,0							
	272,0							
D	C	10	34,0	Z	X2	S	150	Plastic
			68,0	Z	X2	S	150	
R or S	C	9	34,0	Z	X2 or X3	S	150	Textile
			68,0				Or X4	80
			34,0					
			68,0					

(1) According to EN ISO 1890 (tangential take off method).

This list will be revised at each revision of the standard. Other products may take reference to this standard. Other products may make reference to this standard for as many of their properties as conform to the limits given in clause 4.

4 Requirements for yarns intended to general purpose applications

4.1 Physical properties

Table 3: Physical properties

Properties	Individual Limits	Limit of the lot avg (1)	Test Methods	Remarks
Filament diameter (μm)	-	$\pm 10\%$	ISO 1888	-
Linear density (tex) - Single yarns - Folded yarns	$\pm 8\%$ $\pm 6\%$	$\pm 2\%$ $\pm 2\%$	EN ISO 1889 EN ISO 1889	-
Combustible material (size content) (%)	$\pm 30\%$	$\pm 15\%$	ISO 1887	Away from outer migration zones (2)
Twist : Yarn with - $T \leq 52$ TPM (3) - $52 < T \leq 120$ TPM - $120 \text{ TPM} < T$	$\pm 25\%$ $\pm 20\%$ $\pm 15\%$	$\pm 15\%$ $\pm 10\%$ $\pm 8\%$	EN ISO 1890 EN ISO 1890 EN ISO 1890	- - -
Moisture content (%)	Max 0,50 %	Max 0,30 %	EN ISO 3344	Test to be made in centre of the bobbins
Tenacity (cN/tex) - 3 - 4,5 - 5 μm - 6 - 7 μm - 9 μm - 11 μm - 13 - 14 μm	≤ 48 ≤ 43 ≤ 38 ≤ 32 ≤ 30	≤ 55 ≤ 48 ≤ 43 ≤ 36 ≤ 34	ISO 3341	-
<p>(1) These limits apply only to lots for which the sample size will reach at least 32 units.</p> <p>(2) Unless particularly stated in the manufacturers specification, the test specimens for this test should be taken from between the first and last 500 g of the bobbin.</p> <p>(3) TPM = Turns per meter</p>				

4.2 Visual properties

Any bobbin found with a fault, as described in EN 12654-2, shall be considered as rejectable except if it can be eliminated easily through a short run out.