SLOVENSKI STANDARD
SIST EN 12654-2:2000

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Steklene tkanine - Preje - 2. del: Preskusne metode in splošne specifikacije

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

Textilglas - Garne - Teil 2: Prüfverfahren und allgemeine Anforderungen

Verre textile - Fils - Partie 2: Méthodes d'essais et spécifications générales

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ICS:

59.100.10 Materiali iz steklenih vlaken Textile glass materials

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Descriptors: textile glass, textile glass yarns, specifications, physical properties, visual examination, appearance, defects, sampling, storage, packing, acceptability

English version

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

Verre textile - Fils - Partie 2: Méthodes d'essais et spécifications générales

Textilglas - Garne - Teil 2: Prüfverfahren und allgemeine Anforderungen

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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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of an identical text or by endorsement, at the latest by May 1999, and conflicting national standards shall be withdrawn at the latest by May 1999.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.

Introduction

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

EN 12654 "textile glass – Yarns"

- Part 1 : Designation ;
- Part 2 : Method of test and general specification ;
- Part 3 : General requirements for general applications.

1 Scope

This European Standard provides the list of properties and the general requirements for yarns based on continuous filament textile glass (single yarns, folded yarns) and excludes textured yarns and yarns based on staple fibre, rovings and pre-impregnated yarns.

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 ISO 1886, *Reinforcement fibres - Sampling plans applicable to received batches (ISO 1886:1990).*

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 2859-1, *Sampling procedures for inspection by attributes – Part 1 : Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection.*

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

ISO 3343, *Textile glass - Yarns - Determination of twist balance index.*

ISO 3951, *Sampling procedures and charts for inspection by variables for percent non conforming.*

3 List of properties

The list of properties with the applicable test method shall be considered as a guide for the selection of the properties and limits which will be applicable to the yarn families in EN 12654-3..

3.1 Physical properties

Table 1: Physical properties

Properties	Test methods	Remarks
Filament diameter (µm)	ISO 1888	-
Linear density (tex)	EN ISO 1889	By default : One specimen per bobbin
Combustible material (size content) (%)	ISO 1887	Away from outer migration zones 1)
Twist (TPM)	EN ISO 1890	By default : One determination per bobbin
Moisture content (%)	EN ISO 3344	Test to be made in centre of the bobbins
Breaking force (N) or Tenacity (cN/tex)	ISO 3341	-
1) 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.		

3.2 Visual properties

Each bobbin containing one of the following faults will be considered as non-conforming.

3.2.1 Visible faults in the yarn

3.2.1.1 Yarn which is hairy (if more than 100 broken filaments observed on the complete exterior surface of the package.

Limits other than 100 broken filaments may be specified for some specific yarns.

3.2.1.2 Dirty yarn.

3.2.1.3 Slubs or fuzz balls.

3.2.1.4 Cut or partially cut yarn.

3.2.1.5 Faulty gluing (faulty splices) : Where splices are permitted.

EXAMPLES Dirty splice, incomplete (ends not bonded), uneven glue, too long.

3.2.1.6 Incorrect number of ends.

3.2.1.7 Uneven doubling (loops created by a difference in length between two or more yarns wound together).

3.2.2 Visible faults in the wound package

3.2.2.1 Shiny yarn (lack of size).

3.2.2.2 Sloughed yarn.

3.2.2.3 Flared package (bulging package) : If it goes beyond the outer limit of the flange of the bobbin.

3.2.2.4 Undercut package : ie more than a 5 mm distance between the vertical side of the bobbin and the deepest recess form this line.

3.2.2.5 Loops (within the body of the wound package).

3.2.2.6 Loops at the bottom of the wound package.

3.2.2.7 Damaged supports (tubes or bobbin, cut, bruised or broken).

3.2.2.8 Cracked or partially separated wound package.

3.2.2.9 Loose yarn or waste yarn.

3.2.2.10 Foreign matter wound into the package.

3.2.2.11 Protruding yarn (generally, either a bad joint or a bad start to winding).

3.2.2.12 Entrapped end (wedged yarn).

3.2.2.13 Overfilled package (support too full).

3.2.2.14 Package to soft.

3.2.2.15 Package too hard.

3.2.2.16 Defective of dirty connecting (or transfer) tail.

3.2.2.17 Stains.

3.2.2.18 Badly built package.

3.2.2.19 Loops emerging from the flanges, from the cross-overs or windings on the end faces (without flanges).

3.2.2.20 Incorrect or missing identification.

3.2.2.21 Damaged package (frayed package, deformation, knock having taken place during handling after manufacture).

3.2.2.22 Slubs, fuzz balls.

4 General requirements

4.1 Connecting tail

Textile yarn may be made with or without a connecting (or transfer) tail. In the case where the connecting tails are intended, the maximum proportion of bobbins without connecting tails or broken connecting tails may not exceed 10 %.

4.2 Packaging

Each bobbin must be identified on the basis of the complete yarn designation using the code number of the size and by all other necessary means in order to avoid mixing the product. Each packaging unit (carton or pallet) must be identified legibly with the following information :

- designation of the product (which comprises the code numbers of the size and of the wound package ;