

**केन्द्रीय मुहर विभाग-2**

संदर्भ -: केमूवी-2/16:17263

11 07 2023

**विषय: IS 17263:2022 के amendment no. 4 के अनुपालन के दिशा निर्देश**

यह उपरोक्त विषय के संदर्भ में है।

सक्षम अधिकारी द्वारा अनुमोदित दिशानिर्देश अनुपालन हेतु संलग्न है।

सभी क्षेत्रीय/शाखा कार्यालयों से अनुरोध है की दिशानिर्देशों का तत्काल प्रभाव से अनुपालन सुनिश्चित करें।

**आदित्य दास  
वैज्ञानिक D**

**प्रमुख (केमूवी 2)**

**सभी क्षेत्रीय/शाखाकार्यालय/प्रयोगशालाएँ/TXD/LRMD**

**CENTRAL MARKS DEPARTMENT-2**

Our Ref: CMD-2/16:17263

11 07 2023

**Subject: Guidelines for implementation of amendment no. 4 to IS 17263:2022**

This has reference to the subject mentioned above.

The Competent Authority has approved the enclosed Guidelines for implementation.

All ROs/BOs are requested to ensure the implementation of the above Guidelines with immediate effect.

**(Aditya Das)  
Scientist D**

**Head (CMD-2)**

**All ROs/BOs/Labs/TXD/LRMD**

## CENTRAL MARKS DEPARTMENT-2

Our Ref: CMD-2/16: 17263

11 07 2023

### **Subject: Guidelines for implementation of amendment no. 4 to IS 17263:2022 (Textiles — Polyester Staple Fibres — Specification)**

1. Amendment no. 4 to IS 17263:2022 has been published. The last date of implementation of the amendment is **12 Dec 2023**.
2. The significant changes in the standard through this amendment as listed in the Table are given for the purpose of general guidance.

<b>Clause No.</b>	<b>Change</b>
1.4	A clause has been inserted to specify that this standard is not applicable to biodegradable polyester fibre
3	Definition of crimp removal has been modified, and crimp frequency has been removed from terms and definitions. In the definition of Dry Heat Shrinkage (Hot Air Shrinkage), a modification has been made.
Table 3	Typographical error in the name of the requirement for Crimp removal, percent, Min (for filling nonwoven fibres only) has been corrected
Table 4	Requirement for Resistance to ageing (fibres in sheet form at 40°C for 168 h), percent retained strength of original has been removed
Table 4	Requirement for Ultraviolet resistance, 500 h Percent retained strength, Min (For UV resistant yarn only) has been modified from 70, minimum to 80, minimum. Method of test has been changed as well.
8.1	A note has been added in the marking clause to prescribe that: “The yarn manufacturer shall mark on the pallets/cartons whether the yarn is Disperse Dyeable/Conventional Dyeable (COD)/Stock Dyeable(STD)/Easy Dyeable (ED)/Cationic Dyeable or Easy Dyeable Cationic Dyeable (EDCD) for the guidance of the multifold yarn/fabric manufacturers”
9.3.1, 9.3.3	In the requirements for Number of Tests and Criteria for Conformity, “acids/alkalis” has been substituted for “acids/alkalis/ageing” (typographical correction)
Annex A	Referred test method standards have been updated
Annex C	In the test method for determination of crimp properties, use of equivalent crimp measuring equipment has been permitted in addition to crimp balance
Annex G	Method for measurement of silicon content (for siliconized fibres only) has been completed (existing standard did not contain the complete method)

3. Consequent upon the issuance of the amendment, the existing product manual has been revised which is being circulated separately.
4. The guidelines for implementation of the amendment are given below:

## **A. LICENSEES:**

- i. There are mostly editorial changes, and some technical changes in the nature of relaxation in the standard through this amendment. However, there is one technical change, in the standard through this amendment i.e. increase in the minimum requirement and change in the test method for Ultraviolet resistance which is only applicable for UV resistant yarn.
- ii. All licensees shall be informed of this amendment. However, only those licensees which have UV resistant yarn in the scope of their licence, shall be required submit evidence of conformity to the modified requirements of for Ultraviolet resistance through In-house/Independent Test Reports. Verification of implementation of the amendment, wherever required, **shall be verified through a surveillance visit within 30 days of confirmation of implementation of the amendment by licensee.**
- iii. If the Licensee fails to complete all actions by **12 Dec 2023** it shall be dealt with as per the prevailing guidelines.

## **B. APPLICATIONS FOR GRANT OF LICENCE:**

- i. Existing Applications where Sample has been submitted in the Laboratory/Test Report has been issued by the Laboratory may be processed as per the old Standard. However, if the Applicant is desirous of considering the Application as per the amended Standard, a declaration may be obtained from the Applicant to that effect and the Application may be processed accordingly. An undertaking shall from such Applicants also be obtained that if the sample fails while considering the provisions of the amended Standard, Licence will not be granted by BIS as per the old version.
- ii. Applications which are recorded henceforth may be processed as per the old Standard or the amended Standard. Processing of Applications as per the old Standard shall be permitted only up to **11 Dec 2023** and for such cases Applicant shall give a declaration that they will implement the amended Standard by **12 Dec 2023**.
- iii. Beyond **12 Dec 2023** no Licence shall be granted as per the old Standard.

## **C. CHANGE IN SCOPE OF LICENCE:**

- i. For change in scope of licence, the relevant provisions as given above for Applicants shall apply.
  - ii. However, processing of such applications for change in scope of licence as per the old Standard shall be permitted only up to the date of implementation of the amendment or up to **12 Dec 2023** whichever is earlier.
6. The above guidelines come into force with immediate effect.

**Aditya Das  
Sc. D**

**Head (CMD-2)  
DDG (Certification)**

**AMENDMENT NO. 4 APRIL 2023**  
**TO**  
**IS 17263 : 2022 TEXTILES — POLYESTER STAPLES FIBRES — SPECIFICATION**  
*( First Revision )*

*(Page 1, clause 1.3, see Amendment 1)* — Insert the following new clause after the clause 1.3:

**‘1.4 This standard is not applicable to Bio-degradable polyester fibre.’**

*(Page 1, clause 3.2)* — Substitute the following for existing:

**‘3.2 Crimp Removal** — Crimp removal is the increase in length of fibre after complete removal of crimps at specified load expressed as a percentage of the straightened length.’

*(Page 1, clause 3.3)* — Delete and renumber the subsequent clauses.

*(Page 1, clause 3.9, line 3)* — Substitute ‘specified temperature and time’ for ‘180 °C for 30 min’

*[Page 5, Table 3, Sl No. (vi), col (2)]* — Substitute ‘Crimp removal, Percent, *Min* (For filling nonwoven fibres only)’ for ‘Crimp removal, percent, *Min* (For filling nonwoven fibres only)’.

*[Page 6, Table 4, Sl No. (xiii)]* — Delete entire row.

*[Page 6, Table 4, Sl no. (xiv), col (1)]* — Substitute ‘xii’ for ‘xiv’.

*[Page 6, Table 4, Sl no. (iv)]* — Substitute the following for existing row:

iv)	Ultraviolet resistance, 144 h, Percent retained strength, <i>Min</i> (For UV resistant yarns only)	80	Annex F of IS 16481
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*(Page 7, clause 8.1)* — Insert the following note under the clause:

‘NOTE — The fibre manufacturer shall mark on the package whether the fibre is Disperse Dyeable [Conventional Dyeable (COD)/Stock Dyeable (STD)/Easy Dyeable (ED)], Cationic Dyeable (CD) or Easy Dyeable Cationic Dyeable (EDCD) for guidance of the yarn/fabric manufacturers.’

*(Page 9, clause 9.3.1, line 2)* — Substitute ‘acids/alkalis’ for ‘acids/alkalis/ageing’.

*(Page 9, clause 9.3.1, line 4)* — Substitute ‘acids/alkalis’ for ‘acids/alkalis/ageing’.

*(Page 9, clause 9.3.3, line 5)* — Substitute ‘acids/alkalis’ for ‘acids/alkalis/ageing’.

*(Page 9, clause 9.3.3, line 7)* — Substitute ‘acids/alkalis’ for ‘acids/alkalis/ageing’.

## Amendment No. 4 to IS 17263 : 2022

(Page 10, Annex A) — Substitute the following for the existing entries for IS 3456 : 1966, IS 6359 : 1971, IS 16481 : 2016.

<i>IS No.</i>	<i>Title</i>
IS 3456 : 2022	Method for determination of water-soluble matter of textile materials ( <i>first revision</i> )
IS 6359 : 2023	Method for conditioning of textiles ( <i>first revision</i> )
IS 16481 : 2022	Textiles — Synthetic micro fibres for use in cement based matrix — Specification ( <i>first revision</i> )

(Page 10, Annex A) — Delete the following reference:

<i>IS No.</i>	<i>Title</i>
IS 13162 (Part 2) : 1991	Geotextiles — Methods of test: Part 2 Determination of resistance to exposure of ultraviolet light and water (xenon arc type apparatus)
IS 7016 (Part 8) : 1975	Method of test for coated and treated fabrics: Part 8 Accelerated ageing’.

[Page 11, Annex C-2 (a)] — Substitute the following for existing:

‘Crimp balance or equivalent crimp measuring equipment’.

[Page 15, Annex G] — Substitute the following for existing:

**‘ANNEX G**  
(Table 4)

**MEASUREMENT OF PERCENT SILICONE ON FIBRE BY X-RAY FLUORESCENCE  
SPECTROMETER (XRF) AND ASH CONTENT METHOD**

**G-1 MEASUREMENT OF PERCENT SILICONE ON FIBRE BY XRF METHOD**

**G-1.1 Principle**

Silicon percent in polyester is measured on X-ray fluorescence spectrometer. Pellet of polyester fibre is scanned on X-ray which directly gives concentration of elements.

**G-1.2 Apparatus and Reagents**

- a) X-ray fluorescence spectrometer (XRF)
- b) P-10 carrier Gas
- c) Sample pellet
- d) Standard sample for calibration

**G-1.3 Potential Safety and Health Issues**

**G-1.3.1 XRF Unit**

There is no potential safety and occupational health issue as such because radiation safety is well taken care of by the inherent highly standard safety features of the instrument through the use of shielding and interlocks, the operator is fully protected from any radiation hazard. High voltage electrical points are guarded by covers in the case and in no situation the cover is removed during the operation. ELCB and fuses etc. are provided on the live and neutral lines.

### G-1.4 Preparation of Sample

Prepare the sample by pressing fibre sample in carver hydraulic press by simultaneous application of heat and pressure.

### G-1.5 Operation of Pellet Press

Take 8 g to 10 g of siliconized fibre sample and put into the die of pellet. Place the plunger inside the diameter and place in the proper place of carver press. Program the instrument for 10T/20T pressure, 250 °C temperature and for proper residential time setting. Remove the pellet after cooling. Condition the pellet for 5 min to 7 min and measure for percentage Si on XRF.

### G-1.6 Procedure

#### G-1.6.1 Measurement of SiO<sub>2</sub> on XRF

Prior to measurement standardize the instrument with standard sample pellets of known SiO<sub>2</sub> content of different levels and of similar sample symmetry. Switch on the instrument and check the parameters for vacuum, career gas, voltage, X-ray tube etc. Open the measurement program on the PC. Put the sample pellet in the sample holder, close the lid. Start Read button. Read percentage SiO<sub>2</sub> result after complete scanning.

## G-2 MEASUREMENT OF PERCENT SILICONE ON FIBRE BY ASH METHOD

### G-2.1 Principle

Silicone finish is used on fibre for imparting soft feel. Polyester is hydrocarbon. On burning at high temperature carbon and hydrogen are oxidized and removed, only inorganic material is left in form of ash. TiO<sub>2</sub> and antimony inorganic materials are added in small quantity during polymer manufacturing stage. Silicon in form of emulsion is applied at draw line during staple fiber formation. So, we can determine silicon content in fiber easily through measuring difference in ash content before and after application of silicon on fiber.

### G-2.2 Safety, Occupational Health issues

- a) PPE's like safety goggles, nose mask and apron are required.
- b) Crucible is to be handled with care.

### G-2.3 Apparatus

- a) Analytical balance — Capable of weighing to an accuracy of 0.1 mg.
- b) Muffle furnace — Capable of maintaining temperature up to 700 °C.
- c) Tongs.
- d) Heat resistance gloves.
- e) Bunsen burner.
- f) Silica triangle and tripod.

### G-2.4 Analytical procedure

**G-2.4.1** Dry the crucible in an oven at 105 °C for 20 min, then take it out and put it in the desiccator with a lid for conditioning to avoid moisture. Allow the crucible to cool for 20 min and then weigh the empty crucible nearest to 0.1 mg.

**G-2.4.2** Weigh 5 g of spun tow fibre sample before silicon application in the pre-weighed crucible.

**G-2.4.3** Put the crucible with the sample on bunsen burner to burn the sample.

**G-2.4.4** Transfer the crucible in the muffle furnace which is already maintained at 550 °C ± 10 °C and keep the crucible inside for 3 h.

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**G-2.4.5** Take out the crucible from furnace with ash and partially cover it.

**G-2.4.6** Transfer the crucible to the desiccator with a lid, allow to cool and take the final weight of the crucible nearest to 0.1 mg.

**G-2.5 Calculation**

$$\text{Calculation Ash percent} = \frac{[(\text{Weight of Crucible} + \text{Ash}) - (\text{Initial weight of Crucible})] \times 100}{\text{Weight of sample taken}}$$

**G-2.6** Repeat all the above steps (**G-2.4.1** to **G-2.4.6**) with silicon treated fibre and calculate the percentage ash with formula given at **G-2.5**.

**G-2.7** The silicone percentage shall be calculated by the following formula:

Silicone percent = [Percentage ash of siliconized fibre - Percentage ash of spun tow (Without silicon treatment)].'

[Page 17, Annex J-2 (b)] — Substitute the following for existing:

'Square standard tiles (white and black) with the instruments;'