DRAFT INTERNATIONAL STANDARD ISO/DIS 1833-23

ISO/TC **38**

Secretariat: **BSI**

Voting begins on:
2006-10-23

Voting terminates on:
2007-03-26

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Textiles — Quantitative chemical analysis —

Part 23:
Mixtures of polyethylene and polypropylene (method using cyclohexanone)

Textiles — Analyse chimique quantitative —

Partie 23: Mélanges de polyéthylène et de polypropylène (méthode à la cyclohexanone)

ICS 59.060.01

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

Contents

Page

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 1833-23 was prepared by Technical Committee ISO/TC 38, *Textiles*.

ISO 1833 consists of the following parts, under the general title *Textiles — Quantitative chemical analysis*:

- *Part 1: General principles of testing*
- *Part 2: Ternary fibre mixtures*

- *Part 3: Mixtures of acetate and certain other fibres (method using acetone)*
- *Part 4: Mixtures of certain protein and certain other fibres (method using hypochlorite)*
- *Part 5: Mixtures of viscose or cupro and cotton fibres (method using sodium zincate)*
- *Part 6: Mixtures of viscose or certain types of cupro or modal or lyocell and cotton fibres (method using formic acid and zinc chloride)*
- *Part 7: Mixtures of polyamide 6 or polyamide 6.6 and certain other fibres (method using formic acid)*
- *Part 8: Mixtures of acetate and triacetate fibres (method using acetone)*
- *Part 9: Mixtures of acetate and triacetate fibres (method using benzyl alcohol)*
- *Part 10: Mixtures of triacetate and certain other fibres (method using dichloromethane)*
- *Part 11: Mixtures of cellulose and polyester fibres (method using sulfuric acid)*
- *Part 12: Mixtures of acrylic, certain modacrylics or chlorofibres and certain other fibres (method using dimethylformamide)*
- *Part 13: Mixtures of certain chlorofibres and certain other fibres (method using carbon disulfide /acetone)*
- *Part 14: Mixtures of acetate and certain chlorofibres (method using acetic acid)*
- *Part 15: Mixtures of jute and certain animal fibres (method by determining nitrogen content)*

— *Part 16: Mixtures of polypropylene fibres and certain other fibres (method using xylene)*

— *Part 17: Mixtures of chlorofibres (homopolymers of vinyl chloride) and certain other fibres (method using sulfuric acid)*

— *Part 18: Mixtures of silk and wool or hair (method using sulfuric acid)*

— *Part 19: Mixtures of cellulose fibres and asbestos (method by heating)*

— *Part 20: Mixtures of elastane and some other fibres (method using dimethylacetamide)*

— *Part 21: Mixtures of chlorofibres, some modacrylics, some elastanes, acetates, triacetates and some other fibres (method using cyclohexanone)*

— *Part 22: Mixtures of viscose or certain types of cupro or modal or lyocell and flax fibres (method using formic acid and zinc chloride)*

— *Part 23: Mixtures of polyethylene and polypropylene (method using cyclohexanone)*

— *Part 24: Mixtures of polyester and some other fibres (method using phenol and tetrachloroethane)*

Textiles — Quantitative chemical analysis — Part 23: Mixtures of polyethylene and polypropylene (method using cyclohexanone)

1 Scope

This part of ISO 1833 specifies a method, using cyclohexanone, to determine the percentage of polyethylene, after removal of non-fibrous matter, in textiles made of binary mixtures of

- polyethylene

and

- polypropylene.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1833-1, *Textiles — Quantitative chemical analysis — Part 1: General principles of testing*

3 Principle

The polypropylene is dissolved out from a known dry mass of the mixture, with cyclohexanone. The residue is collected, washed, dried and weighed; its mass, corrected if necessary, is expressed as a percentage of the dry mass of the mixture. The percentage of polypropylene is found by difference.

4 Reagents

Use the reagents described in ISO 1833-1 together with that described in 4.1.

4.1 Cyclohexanone, boiling point 156°C.

SAFETY PRECAUTIONS — Cyclohexanone is flammable and toxic. Suitable precautions shall be taken in its use.

5 Apparatus

Use the apparatus described in ISO 1833-1 together with that described in 5.2.

5.1 Flat bottom flask or conical flask, minimum capacity 500 ml, glass-stoppered.

5.2 Thermostatically controlled bath, designed to operate at up to 150 °C. Safety devices shall be fitted to prevent overheating.

6 Test procedure

Follow the general procedure described ISO 1833-1, and then proceed as follows.

To the specimen contained in the flat bottom/conical flask, add 100 ml of cyclohexanone per gram of specimen. Shake the flask.

Place the flask into the bath and heat the flask and maintain the temperature between 50 °C to 60 °C for some time and then slowly raise the temperature to 145 °C.

Allow the mixture to stand in this condition for about 10 min, until the polypropylene is completely dissolved.

Allow it to stand for 30 min at room temperature, and then decant the liquid through the weighed filter crucible.

Wash the residue into the filter crucible with acetone, and drain with suction. Refill the crucible with hot cyclohexanone and allow it to drain under gravity.

Finally, drain the crucible using suction, dry the crucible and residue, then cool and weigh them.

7 Calculation and expression of results

Calculate the results as described in the general instructions of ISO 1833-1.

The value of *d* is 1,00.