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Foreword

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

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Textiles — Evaluation method of light absorption and heat generation

Introduction

Assessment of a fibre material that enhances heat retention through absorbing mainly sunlight can be performed by exposing a specimen to irradiation from a lamp (artificial sunlight) and then measuring the temperature change of the specimen surface caused by light-to-heat conversion by the material.

Ability to absorb visible and infrared rays of sunlight and convert them to heat is a characteristic that is most widely recognized in zirconium carbide mixed into fibre, which absorbs sunlight components of specific wavelengths and efficiently converts them into thermal energy.

The test method specified in this Standard applies to heat-storing textile materials and light-to-heat conversion type heat-retaining textile materials. It evaluates the temperature change in the specimen surface resulting from the conversion of light to heat by the material.

No corresponding International Standard has been established at this point.

1 Scope

This Standard specifies a method for evaluating light absorption and heat generation property of fabric materials used in textile products such as golf wear, fishing wear and winter trekking wear.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

- JIS C 8904-9 *Photovoltaic devices — Part 9 : Solar simulator performance requirements*
- JIS L 0105 *General principles of physical testing methods for textiles*
- JIS L 0208 *Glossary of terms used in textile industry — Testing*
- JIS R 1803 *Method for the spectral radiant energy measurement of far infrared heaters specified in the far infrared region*
- ISO 9060 *Solar energy — Specification and classification of instruments for measuring hemispherical solar and direct solar radiation*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS L 0105**, **JIS**