International Standard

ISO 19374

Recycled carbon fibres — Designation system for recycled carbon fibres

Fibres de carbone recyclées — Système de désignation des fibres de carbone recyclées

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Foreword

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Carbon fibres are applied for the reinforcement of polymers or other materials. In particular, the recycled carbon fibres are being highly durable and have limited degradation through recycling, their reuse for adaption to circular economy is of much value. This designation system of recycled carbon fibres is necessary to clearly specify the identification of essential characteristics of recycled carbon fibres.

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Recycled carbon fibres — Designation system for recycled carbon fibres

1 Scope

1.1 This document establishes a designation system of recycled carbon fibres, which can be used as the basis for specification.

1.2 This designation system is applicable to recycled carbon fibres used for polymer composites.

1.3 The types of recycled carbon fibres are differentiated by a designation system based on appropriate levels of the designatory properties:

a) tensile modulus of elasticity.

b) tensile strength.

NOTE One to five designatory property(s) that differentiate recycled carbon fibre types from each other is (are) assigned.

1.4 It is not intended to imply that recycled carbon fibres having the same designation will give the same performance. This document does not provide engineering data or data on processing conditions that can be required to specify materials for a particular and/or method of processing.

1.5 In order to specify recycled carbon fibres for a particular application, additional requirements are given in optional data block 5 (see 4.6).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 6989, *Textile fibres — Determination of length and length distribution of staple fibres (by measurement of single fibres)*

ISO 11566:1996, *Carbon fibre — Determination of the tensile properties of single-filament specimens*

ISO 19350, *Recycled carbon fibre — Determination of tensile strength distribution and interfacial shear strength of single filament embedded in matrix polymer*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

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