

JIS

JAPANESE INDUSTRIAL STANDARD

**Testing methods for tensile creep
of carbon fibre reinforced plastics**

JIS K 7087^{—1996}

Translated and Published

by

Japanese Standards Association

**In the event of any doubt arising,
the original Standard in Japanese is to be final authority**

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Errata are also provided to subscribers of JIS (English edition) in *Monthly Information*.

1. Scope This Japanese Industrial Standard specifies the general testing methods for tensile creep (hereafter referred to as "creep test") of carbon fibre reinforced plastics (hereafter referred to as "CFRP"), that is, the measurement of tensile creep elongation and/or of the time elapsed from test starting to the fracture of a test piece or to the specified creep distortion with applying a specified tensile load (hereafter referred to as "test load") under specified test atmosphere for long time. These methods, however, shall not apply to the test measuring the tensile creep elongation of unidirectional CFRP which is performed with aligning loading direction to the axis of fibres.

Remarks 1. The test atmosphere shall be two types of the standard test atmosphere specified in (1) of 3.2 and $50 \pm 2^\circ\text{C}$.

2. When comparing the data of tensile creep between materials, generally, carry out using the test piece with the same shape and under the same test atmosphere.

3. The standards cited in this Standard are listed as follows.

JIS B 7502 Micrometer callipers

JIS B 7507 Vernier, dial and digital callipers

JIS K 6900 Plastics – Vocabulary

JIS K 7010 Vocabulary for fibre reinforced plastic

JIS K 7072 Preparation of carbon fibre reinforced plastic panels for test purpose

JIS K 7073 Testing method for tensile properties of carbon fiber reinforced plastics

JIS K 7100 Standard atmospheres for conditioning and testing of plastics

JIS Z 8401 Rules for rounding off of numerical values

2. Definitions The definitions of terms mainly used in this Standard shall be as follows except those defined in JIS K 6900 and JIS K 7010.

(1) tensile creep stress The value obtained by dividing tensile load applied to test piece by the original section area of gauge part of the test piece.

(2) gauge part Paralleled part of a test piece excluding the part where a tab is attached, and in case of tabless, paralleled part excluding grips.

(3) distance between bench marks The distance between two bench marks, marked before testing, on the gauge part of a test piece for the purpose of measuring tensile creep elongation.

(4) tensile creep elongation The value obtained by subtracting the distance between two bench marks given just before loading from the distance measured when arbitrarily specified time has passed since applying test load on a test piece.