

JIS

JAPANESE INDUSTRIAL STANDARD

**Test method for
compressive properties of
fiber reinforced metals**

JIS H 7407^{—1995}

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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Test method for compressive properties of
fiber reinforced metals

H 7407-1995

1. Scope This Japanese Industrial Standard specifies the test method for compressive properties in atmospheric pressure at room temperature of metal matrix composite reinforced with continuous fiber.

Remarks: The following standards are cited in this Standard:

JIS B 7502 Micrometer callipers

JIS B 7507 Vernier, dial and digital callipers

JIS B 7733 Compression testing machines

JIS H 7006 Glossary of terms used in metal matrix composites

JIS Z 8401 Rules for rounding off of numerical values

2. Definitions For the main terms used in this Standard, the definitions given in JIS H 7006 apply, and the rest of the terms are as follows.

- (1) compressive stress Such a value that the compressive load applied to a test piece at any time during a compressive test is divided by the original area of the gauge part of the test piece.
- (2) compressive strength The maximum compressive stress sustained by the test piece during a compressive test.
- (3) compressive strain A value that the variation of gauge length caused in the loading direction of a test piece due to the compressive load is divided by the original gauge length.
- (4) maximum compressive strain The compressive strain corresponding to a compressive strength.
- (5) compressive modulus The compressive stress during a compression test divided by the compressive strain. Here, it means the following:
 - (a) A value which is obtained from the inclination of the initial straight part in the compressive load/compressive strain diagram or compressive stress/compressive strain diagram. Its quantity symbol is E_1 (see Figure 1).
 - (b) The value which is obtained from the inclination of the tangent line drawn at a 0.5% strain in the compressive load/compressive strain diagram or compressive stress/compressive strain diagram. Its quantity symbol is E_2 (see Figure 1).