



Australian Government

National Standards Commission

12 Lyonpark Road, North Ryde NSW 2113 Australia

Notification of Change

General Certificate of Approval No 1/0/A

Change No 1

The following changes are made to the approval documentation for

Length Measures of 100 mm to 100 m.

All the documentation for this approval, comprising General Certificate of Approval No 1/0/A and its Technical Schedule both dated 8 April 2003, are superseded by the documentation attached herein, and may be destroyed.

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

A handwritten signature in black ink, appearing to be 'J. H. T.', written on a light-colored background.



Australian Government

National Standards Commission

12 Lyonpark Road, North Ryde NSW 2113 Australia

General Certificate of Approval

No 1/0/A

Issued under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the

Length Measures of 100 mm to 100 m.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This Certificate is issued upon completion of a review of NSC approval No 1/0.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 October 2008, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 1/0/A.

It is the responsibility of the manufacturer to ensure that all instruments purporting to comply with this approval are constructed in accordance with this General Certificate of Approval and its Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act.

The Commission reserves the right to examine any instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 7 April 2003
re-approved 25 September 2003

- Length measures of 100 mm to 100 m.

FILING ADVICE

General Certificate of Approval No 1/0/A and its Technical Schedule both dated 8 April 2003 are superseded by this Certificate and Technical Schedule, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 1/0/A dated 1 October 2003
Technical Schedule No 1/0/A dated 1 October 2003 (incl. Test Procedure)

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

A handwritten signature in black ink, appearing to be 'J. H. B.', is written on a light-colored rectangular background.

TECHNICAL SCHEDULE No 1/0/A

Pattern: Length Measures of 100 mm to 100 m

1. Description of Pattern

1.1 Nominal Values

Length measures shall be limited to the following values:

- 100, 150, 200, 300, 500 and 600 mm; and
- any whole number of metres up to 100 m.

The maximum length for rigid measures shall be 2 m.

1.2 Construction

(i) Material

(a) Rigid Measures

Rigid measures shall be made from materials of adequate strength, stability and rigidity including, but not limited to, stainless steel, nickel or chromium-plated steel, brass, synthetic materials such as 'nylon' or 'makrolon', and suitable hardwood such as Moracaibo Boxwood.

(b) Flexible Measures

Flexible tape measures shall be made of carbon steel, stainless steel, coated steel, or etched steel. Flexible tape measures up to 30 m in length may be made of a suitable synthetic material of adequate strength and stability.

(ii) Finish

Every measure of length shall be free from flaws.

Rigid measures shall be smooth and straight.

For measures not made of metal an exposed end or ends shall be tipped with metal and the tips shall be securely fastened.

The end surfaces forming two principal scale marks of end measures shall be flat and perpendicular to the longitudinal axes of the measures.

Measures of length may be graduated on both sides.

On measures with sliding or calliper arms, such arms shall have no more play than is necessary for easy movement.

1.3 Design of Linear Scales

(i) Scale Markings

Graduated scales on measures of length shall comply with the requirements of National Standards Commission Document NSC P105, *Pattern Approval Specifications for the Graduation of Analogue Scales*, as applicable to linear measurement.

Measures of length which are not sub-divided shall be legibly stamped NOT SUB-DIVIDED.

The value of the scale interval shall be in the form 1, 2 or 5 x 10ⁿ mm, cm or m where n is a positive or negative whole number or zero.

More than one form of graduated scale with different scale intervals may be marked on a measure.

Scale marks may take forms other than lines (e.g. holes, indentations) provided that the scale interval is equal to or greater than 1 cm and all marks are denominated.

Only the following unit symbols shall be used:

metre	m
centimetre	cm
millimetre	mm

Notes:

- (a) Measures marked in both imperial and metric units are not permitted for trade use.
- (b) On flexible tape measures only it is permissible:
 - for there to be no markings between 0 and 2 cm; and
 - for the digits of the number indicating the maximum length to be aligned either horizontally or vertically.

(ii) Descriptive Markings

Length measures are marked with the following data:

Manufacturer's name or mark
Pattern approval mark	NSC No 1/0/A

Measures of length shall not bear a trade or other mark which could be mistaken for either the denomination or verification mark.

(iii) Verification/Certification Mark

Provision shall be made for a verification/certification mark to be applied.

1.4 Performance Requirements

(i) Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for any length, L , are:

± 0.5 mm for lengths $0 \leq L \leq 500$ mm;

± 1.0 mm for lengths $500 \text{ mm} < L \leq 2$ m; and

$\pm 0.05\%$ for lengths > 2 m.

(ii) Rules for the Determination of Errors

(a) Temperature

Every measure of length shall be correct at 20°C.

(b) Extensibility

Every flexible tape measure exceeding 8 m in length shall be tested when subjected to a tension ($\pm 10\%$) of 20 N for synthetic materials and 50 N for metals, or as otherwise marked on the measure by the manufacturer. While under test, a length measure must be supported throughout its whole length on a level base or in such other manner as will enable its length to be correctly determined.



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CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 March 2008, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 1/0/A.

It is the responsibility of the manufacturer to ensure that all instruments purporting to comply with this approval are constructed in accordance with this General Certificate of Approval and its Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act.

The Commission reserves the right to examine any instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 7 April 2003

- Length measures of 100 mm to 100 m.

FILING ADVICE

General Certificate of Approval No 1/0 dated 25 October 1984 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 1/0/A dated 8 April 2003
Technical Schedule No 1/0/A dated 8 April 2003 (incl. Test Procedure)

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