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PERFECT INTERNATIONAL INSTRUMENT
 东莞宝大仪器有限公司
 全球服务电话: 400-6677223
 of Pressure Sensitive Tapes

1. DEFINITION

1.1 This document sets forth voluntary guidelines for widths and lengths of pressure sensitive tape, except tape used for medical, surgical, electrical and label stock purposes, including tolerances and labeling in the SI (metric) systems and inch-pound (English or Imperial) system.

1.2 Pressure sensitive tape is defined as a pressure sensitive adhesive coated substrate in roll form wound on a core, equal to or greater than 0.305 meter (12 inches) in length.

2. SIGNIFICANCE

2.1 Conformance to this guide will reduce chances of misunderstandings between suppliers and users of pressure sensitive tapes.

2.2 It is recommended that this guide be referenced where widths and lengths of pressure sensitive tapes are stated, such as in contracts, orders, advertisements and labeling.

3. UNITS OF MEASUREMENT

3.1 All widths and lengths are to be stated using a primary measurement system and a secondary measurement system, the latter being a calculated value using procedures described herein. The SI (metric) system is preferred as the primary measurement system.

3.2 The unit of width shall be millimeters (mm) or inches (in).

3.3 The unit of length shall be meters (m) or yards (yds). For rolls 72 yards (2592 in.) and under, the length may be stated in inches.

3.4 When width is stated in millimeters, the length shall be stated in meters. When width is stated in inches, the length shall be stated in yards or inches.

4. STANDARD WIDTHS

4.1 Preferred Method: Metric system as primary.

4.1.1 When the metric system is used as the primary measurement system, widths are stated in a modular system with 3 mm increments for rolls under 24 mm, 6 mm increments for roll widths between 24 mm and 48 mm, and 12 mm for roll widths over 48 mm.

4.1.2 The inch width should be calculated and listed in addition to the primary metric with and the inch width should be stated in inches rounded down to the nearest one-hundredth of an inch.

4.2 Optional Method: Inch-pound system as primary.

4.2.1 When the inch-pound system is used as the primary measurement system, widths are stated in a modular system with 1/8 in. increments for roll widths under 1 in., 1/4 in. increments for roll widths between 1 and 2 in., and 1/2 in. increments for roll widths over 2 in.

4.2.2 The metric width should be calculated and listed in addition to the primary inch-pound width, and should be stated in mm rounded down to the nearest one-tenth of a mm.

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5. TOLERANCES

5.1 The applicable tolerance shall be that of the primary measurement system.

5.2 Width

5.2.1 In the metric system the width tolerance shall be ± 0.8 mm. This applies only to materials less than 1000 mm in width.

5.2.2 In the inch-pound system the width tolerance shall be $\pm 1/32$ in. This applies only to materials less than 36 in. in width.

5.2.3 In any shipment or offering of tape, the average width of all rolls shall equal or exceed the stated value.

5.3 Length

5.3.1 For both the metric and inch-pound systems, the average roll length in any shipment or offering of tape shall equal or exceed the stated value. Roll length is defined as the length of tape on the roll minus the tab and any tape on the core which cannot be removed and used for the intended purpose.

6. LABELING

6.1 With both systems the width will be stated first followed by the length.

6.2 The size, width and length, as determined by the primary measurement system shall be listed first. The secondary, calculated, units shall be in parentheses.

7. CALCULATIONS OF SECONDARY MEASUREMENT

7.1 When the primary measurement is the metric system, the inch-pound width is calculated using $1 \text{ mm} = 0.03937 \text{ in.}$ The inch-pound width, rounded down to the nearest one hundredth of an inch, is stated as the secondary width. The inch-pound length is calculated using $1 \text{ m} = 1.0936 \text{ yd.}$ The inch-pound length, rounded down to the nearest one-tenth of a yd., is stated as the secondary length (e.g., $48 \text{ mm} \times 50 \text{ m}$ [$1.88 \text{ in.} \times 54.6 \text{ yd.}$]).

7.2 When the primary measurement is in the inch-pound system, the metric width is calculated using $1 \text{ inch} = 25.4 \text{ mm.}$ The metric width, rounded down to the nearest one-tenth of a mm, is stated as the secondary width. The metric length is calculated using $1 \text{ yd.} = 0.9144 \text{ m.}$ The metric length, rounded down to the nearest one-tenth of a meter, is stated as the secondary length (e.g., $2 \text{ in.} \times 60 \text{ yd.}$ [$50.864 \text{ mm} \times 54.9 \text{ m}$]).

7.3 The secondary measurement is always rounded down to the nearest appropriate interval. In the example of paragraph 7.2, 60 yd. equals 54.864 m but the metric roll length in this case is stated as 54.9 m.

8. TESTS

8.1 Conditioning. Prior to dimensional measurements, the tape samples should be conditioned at $23^\circ\text{C} \pm 2^\circ\text{C}$ ($73.4^\circ\text{F} \pm 3.6^\circ\text{F}$) and $50\% \pm 5\%$ relative humidity for 24 hours.

8.2 Width and Length.

8.2.1 Apparatus. NIST * traceable (calibrated) measuring device of sufficient accuracy.

8.2.2 Procedure. Any means which produces accurate and reproducible results on the tape without stretching or other deformation.

9. REFERENCE DOCUMENTS

ASTM D 5759, Standard Guide to Width and Length of Pressure Sensitive Tape

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10. COMMENTS

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This is a voluntary guide to be used except when the customer otherwise requires. Conformance does not ensure compliance with other standards, specifications, or legal requirements which may or does it imply endorsement of the product by the Pressure Sensitive Tape Council.

*NIST: National Institute of Standards & Technology
Washington, DC 20234