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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  
 Tear Resistant Sensitive Tapes

**1. DEFINITION**

1.1 Tear resistance is the force required to propagate a tear in a tape in a given direction after the tear has been initiated.

**2. SIGNIFICANCE**

2.1 Tearing resistance is an important characteristic of tape in a number of applications.

**3. TEST SPECIMEN**

3.1 For test specimen conditioning, selection, and test conditions see Appendices A and D.

3.2 Specimens for the test shall be cut accurately in each principal direction of the tape about 75 mm (3") long by 63 mm (2 1/2") wide. Not less than five tests shall be made in each of the directions specified.

**4. EQUIPMENT**

4.1 Elmendorf tear test tester. (See Figure 1.)

**5. TEST METHOD**

5.1 A specimen shall be placed securely in the clamps. By use of the knife blade, a slit shall be cut in the specimen starting at the bottom edge and perpendicular thereto, and ending 43 mm (1.7") short of the top edge. The accuracy of the readings obtained with the apparatus depends to a great extent on the exactness of this 43 mm (1.7") of uncut specimen. The sector release shall be pressed, causing the sector to fall, thus moving the pendulum jaw away from the fixture so as to tear the specimen. The force required to tear the specimen in the given direction shall be read from the scale. Readings obtained where the tear deviates more than 10 mm (3/8") away from the line of the initial slit shall be rejected. Likewise, if the side of the specimen above the movable jaw rubs against the sector as the tear is made, the reading shall be rejected.

5.2 The test shall be made on enough layers of tape so that when torn together, the scale readings are between 20 and 60, and the number of layers shall be recorded.

5.3 When more than one layer is used, the layers of tape shall be placed adhesive to backing with the exposed adhesive of the outer layer being dusted with talc to completely nullify the tack.

5.4 Not less than five tests shall be made in each of the directions specified.

**6. REPORT**

6.1 Report the results as the average force in Newtons required to tear a single sheet. Since the scale readings are made 1/16 of the actual values, this is calculated by multiplying the average instrument readings by 16 and dividing by the number of layers. Report the results obtained on strips torn in the machine direction as tearing resistance, machine direction and on strips from across the machine direction as tearing resistance, cross direction.

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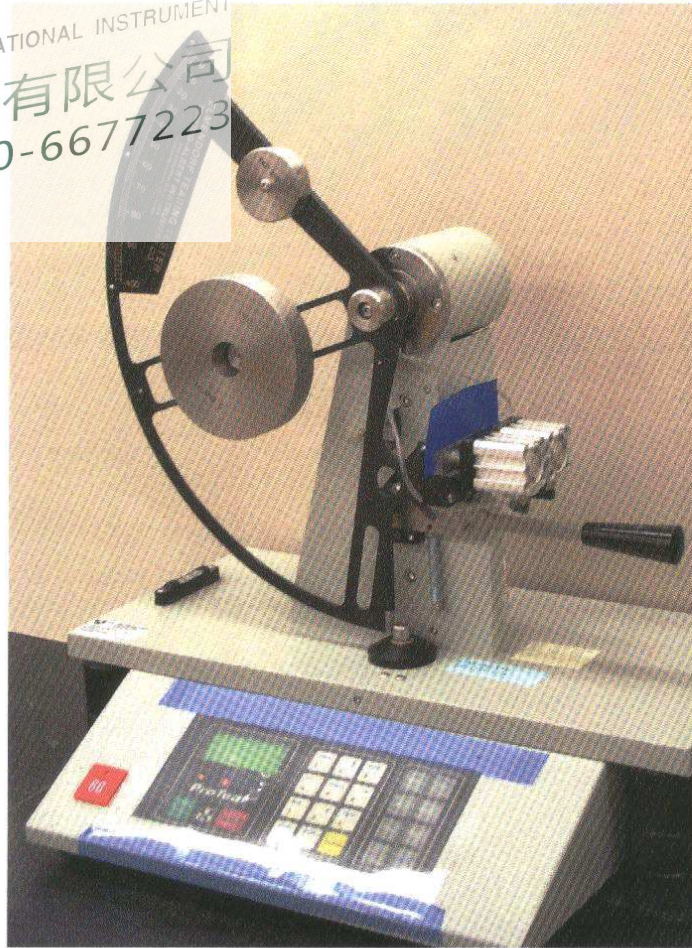


Figure 1. Elmendorf tear test tester.