

# Dennison Standard Test Waxes

## Model 30-17

### FOR DETERMINING THE RESISTANCE TO SURFACE PICK OF PAPER AND BOARD

Dennison-type Wax Pick Testing is for the evaluation of surface strength on paper and paperboard. Waxes are heated and applied to the surface of the sheet. After cooling, they are pulled from the surface and the wax stick is checked to see if it has pulled fiber or coating from the surface. The highest value wax which does not rupture the surface is reported as the pick strength of the sheet.

This traditional test has been used for many years and is well known around the world. It is simple, easy, and inexpensive.

Applicable standards: TAPPI T459

For testing in accordance with TAPPI method T-459



### APPLICATION

The integrity of a paper or board surface depends both on the characteristics of the fibre matrix and those of the applied coating. The fibres must be as evenly distributed as possible, be “keyed” into the sheet with sufficient bonding to adjacent fibres and have liquid absorption properties to give the correct “bleed” into the sheet of the coating adhesive or binder and the water dispersant.

The coating must have the correct ratio of pigment and binder to correlate both with the base paper quality to ensure strong adhesion, also to give the desired “finish” to the product. The degree of adhesion and hence surface integrity maintained under conditions imposed by subsequent drying, calendaring and printing operations is widely measured with Dennison waxes.

### TEST DESCRIPTION

The Dennison wax set consists of a series of hard resin, non-oily waxes with graded degrees of adhesion. Each of the waxes in the series has a cross section of 18 x 18 mm and is identified by code. In operation, the appropriate wax is softened over a spirit lamp and pressed onto the test piece held in place with a hollow wooden block. After cooling, the wax is pulled vertically from the sheet and the surfaces inspected. The test is repeated using the waxes in numerical order until the sample surface blisters, breaks, picks or lifts. The samples may be graded in terms of the “critical wax strength numbers” which is the highest number of wax stick that does not disturb the surface of the sample.

### ORDERING INFORMATION

Part Number 30-17-00-0001 (full test kit)

Dennison Standard Paper Testing Wax Kit comprising one stick of each wax type 2A through 23A (17 wax sticks total in kit), with an alcohol lamp, one wick, and wooden pull block.

Part Number: 30-17 with wax stick number (ex. 30-17-02, 30-17-20)

Replacement waxes are sold by the box, 8 waxes of a particular value per box.

Following numbers are available: (please list when ordering replacements, 8 waxes per box of the same value)

2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 10A, 11A, 12A, 13A, 14A, 16A, 18A, 20A, 23A

### DIMENSIONS AND WEIGHT

Dimensions (WxDxH): 350 x 150 x 80 mm (13.7 x 5.9 x 3.1 in)

Box for Transport (WxDxH): 410 x 300 x 250 mm (16.1 x 11.8 x 9.8 in)

Weight net/gross: 3 kg / 4 kg (6.6 / 8.8 lb)