

**Drying Time
Tester
Model 415**



ERICHSEN
TESTING EQUIPMENT



**DIN 53 150
DIN EN ISO 1517**

**For measuring the
degree of dryness of
paints and lacquers**

Purpose and Application

The **Drying Time Tester, Model 415**, enables the degree of dryness on paints and lacquers to be determined in accordance with DIN 53 150 (modified Bandow-Wolff method).

Apart from evaluating the drying rate, the test in compliance with this standard also provides evidence of whether a specified degree of dryness on the painted surface has been achieved within a prescribed time.

Design and Function

The Drying Time Tester, Model 415, consists of an aluminium cylinder which is fixed to a stand. The pressure spring integrated in the aluminium cylinder facilitates a plunger force of up to 250 N, which is applied to the painted surface in a precise, perpendicular motion by way of a lever mechanism.

To achieve a uniform distribution of the contact pressure on the paper disk as well as on the painted surface below, a cylindrical soft rubber disk with shore A hardness (50 ± 5) IRHD to ISO 48, a diameter of 22 mm and a thickness of ($5 \pm 0,5$) mm is placed on the paper disk before applying the load.

The clearance between the plunger and the base table can be set to the thickness of the test panel by adjusting the lever bracket accordingly.

Loading weights (20 g and 200 g) with a diameter of 24 mm are included in the scope of delivery for standardized loads of less than 2 kg.

Conducting the Test

The test sequences vary in accordance with the dryness degree as follows:

Dryness degree 1

The painted surface is covered with ballotini which are subsequently removed using a fine brush.

Dryness degrees 2 and 3

First a paper disk is placed on the painted surface, then a soft rubber disk. Loads of 20 g and 200 g are applied by adding the individual weights provided.

Dryness degrees 4 to 7

The test panel is placed on the stand base with the painted side upward, covered with a paper disk on top of which a soft rubber disk is placed. The required load (2 or 20 kg) is produced using lever pressure and maintained for approx. 60 s.

Assessment of Test

After removing the load, the painted surface is evaluated in accordance with the following table.

Dryness degree	Criteria in accordance with DIN 53 150
1	Ballotini scattered over the surface can be easily and completely removed with a fine hair brush.
2	The paper does not adhere subsequent to loading with 20 g.
3	The paper does not adhere subsequent to loading with 200 g.
4	The paper does not adhere subsequent to loading with 2 kg, there are however visible signs of change on the painted surface.
5	The paper does not adhere subsequent to loading with 2 kg, and there are no visible signs of change on the painted surface.
6	The paper does not adhere subsequent to loading with 20 kg, there are however visible signs of change on the painted surface.
7	The paper does not adhere subsequent to loading with 20 kg, and there are no visible signs of change on the painted surface.

Technical Data

Dimensions:	Width: approx. 150 mm
	Depth: approx. 300 mm
	Height: approx. 440 mm
Net weight:	approx. 4.5 kg

Order Information	
Order No.	Description of Product
0093.01.31	Drying Time Tester, Model 415
<i>Included in scope of delivery:</i>	
<ul style="list-style-type: none">◆ Stand◆ Weights for loads of 20 g and 200 g each◆ 2 soft rubber disks of 22 mm Ø◆ 100 paper disks of 26 mm Ø◆ Ballotini dispenser◆ 50 g glass beads ("ballotini") in compliance with DIN EN ISO 1517, Ø 125 - 250 µm	

Subject to technical modification.
Group 9 - TBE 415 - VI/00