



Washability and Scrubbing Resistance Tester Model 494 MC

**Operation via
touch panel**

**Adjustable stroke rate
and
stroke path**

**Parameter storage for
20 test cycles**

**Up to 3 tests
simultaneously**



testing equipment for quality management

ERICHSEN

Technical Description

**DIN 53 778-2
ASTM D 2486
DIN EN ISO 11998**

**For the determination of the
washing and scrubbing
resistance as well as
cleanability of dispersion
paints**

Purpose and Application

The **ERICHSEN Washability and Scrubbing Resistance Tester, Model 494 MC**, is mainly intended for the determination of the washing and scrubbing resistance as well as cleanability of dispersion paints (specifically "wall paints"). The wide range of its adjustable parameters allows also some further tailored/customized testing matters (for example for testing cleaning agents/solutions, etc.) as well.

Principle of Test

In the above standard applications a matt black PVC foil will be coated, and - if required - soiled in a defined manner. After clamping into the device it will be exposed under the influence of a washing liquid the stress of the moving scrub body:

a) Test in accordance with DIN 53 778- 2 *)

The scrub body is a defined pig bristle brush, which is charged with 250 g. The washing fluid is continuously fed by a micro dosing pump. Whether the contamination has been removed or the coating is scrubbed through to the substrate, will be checked after an agreed number of scrubbing cycles.

*) withdrawn, replaced by DIN EN ISO 11998



b) Test in accordance with ASTM D 2486

The scrub body is a defined nylon brush, which is charged with 454 g. The washing liquid is applied manually during the test at regular intervals and in a defined amount. For sharpening the wear effect of the scrubbing action, a narrow thin strip of metal sheet will be placed centrally and transversely to the stroke direction under the foil. The test result is the number of double strokes up to scrubbed through to the substrate.



c) Test in accordance with DIN EN ISO 11 998

The scrubbing body is a defined type of abrasive pad loaded with 135 g, which is moistened prior to the test only once with a defined quantity of the washing fluid. After scrubbing strain (200 double strokes) the mass loss per unit area of the coating and the average layer thickness loss will be determined.



Design and Operation

The instrument (attached with leveling feet) has a top cover plate on which the steel trough for the testing performance is placed. Further, it is equipped with two specimen clamping devices. A high-precision step motor operated by a microcontroller allows a periodic linear movement of the drive frame which holds/guides the abrasion bodies, with a high repeatability. The swivel-mounted frame for inserting the abrasion bodies is designed for holding/guiding up to three of them. Due to this up to three parallel abrasion tests are possible. For tests according with DIN EN ISO 11998, the supplied ISO adapter has to be mounted.

The operation via touch panel is comfortable, with the functions:

- **controlling** the stroke (start, stop, reset),
- **setting the test parameter** (stroke rate, stroke path, number of double strokes),
- **storage** of frequently used test sequences (up to 20 sets of parameters).

Technical Data

Dimensions (WxDxH)	(590 x 370 x 280) mm
Weight (net)	approx. 22 kg
Power supply	(100 - 240) VAC (External wide-range power adapter) (47 - 63) Hz, 24 VDC / 3 A
Stroke rate	(5 - 70) double strokes/min
Stroke path	(10 - 300) mm, depending on the stroke rate

Order Information

Ord.-No.		Product Description
03010131		Washability and Scrub Resistance Tester, Model 494 MC Microcontroller-operated instrument for washability and scrub resistance as well as for cleanability; touch panel. Supplied with power pack, glass plate, stainless steel trough with outflow connection and rubber plug, spirit level, ISO-adaptor, but <u>without</u> abrasive accessories; <u>without</u> Manufacturer's Test Certificate. <u>Optionally:</u> the stainless steel trough with outflow connection and rubber plug is available with an extended edge height – on request, against additional costs.
16297032		Manufacturer's Test Certificate M acc. to DIN 55 350, Part 18, incl. cost for examination and calibration/re-calibration, for Washability and Scrub Resistance Tester, Model 494 MC
16297132		Manufacturer's Test Certificate M acc. to DIN 55 350, Part 18, incl. cost for examination and calibration/re-calibration, for Washability and Scrub Resistance Tester, Model 494 MC, <u>with</u> brush (without determination of the scrubbing factor)

Necessary Accessories (at option)

Ord.-No.		Product Description
00680132		<u>DIN Equipment for tests in accordance with DIN 53 778-2</u> 1 pig bristle brush DIN, 1 brush holder DIN, 1 rubber lining
00680232		ASTM Equipment for tests in accordance with ASTM D 2486 1 Nylon brush ASTM, 1 brush holder ASTM, 1 rubber lining, 1 clamping frame with seal 2 metal strips
07870132		<u>Abrasive Pad Holder Plate (without pad)</u> for tests in accordance with DIN EN ISO 11998
08900132		<u>Abrasive pad</u>, type 3M Scotch Brite No. 7448 pre-cut (per 7 pcs./set)
00870132		<u>Micro-Dosing Pump with drip arrangement</u> for tests in accordance with DIN 53778-2 (for each abrasive track a separate micro dosing pump is necessary)

Necessary Accessories (at option)		
Ord.-No.		Product Description
00700132		<u>PVC Foil</u> Black, fine matt finish, 430 x 165 mm, per 100 pcs.
00700232		<u>PVC Foil</u> Black, fine matt finish, 430 x 280 mm, per 100 pcs.
Spare Parts		
00710132		<u>Pig Bristle Brush DIN</u>
00720132		<u>Brush Holder DIN</u>
00710332		<u>Nylon Brush ASTM</u>
00720232		<u>Brush Holder ASTM</u>
04350132		<u>Rubber Lining</u> Suitable for all brush holder
610000141		<u>Thick Glass Plate</u> flat, matt on one side, 430 x 165 x 6 mm

Please refer also to our Technical Leaflet 494 MC-Basic (DIN / ISO).