RESISTIVITY

RESISTEK DIGITAL RESISTIVITY METER



The Resistek NK-RE4500 measures the resistivity of paints and solvents to optimise electrostatic painting.

STANDARS

ASTM D5682

The **Resistek NK-RE4500 Digital Resistivity** Meter is NK by NEURTEK's benchmark instrument for accurately measuring
the electrical resistivity of paints, varnishes and solvents used in electrostatic painting processes. Inadequate coating resistivity directly compromises the efficiency of the process: if it is too low, short circuits occur; if it is too high, the paint does not charge correctly and application performance drops.

Its immersion probe with protection against excess liquid, its auto-scaling function and its rapid result in 10 seconds make it an essential tool for quality control on electrostatic painting lines, compatible with the sector's leading systems and manufacturers (Sames, Ransburg, Volstatic, Hursant, NESAG, Straton).).

APPLICATION

- **Electrostatic painting (liquid and powder):** verifying that the resistivity of the coating or solvent is within the optimum range for the correct electrostatic charging of the particles.
- **Formulation adjustment:** monitoring resistivity during the development of new paints or the dilution of existing coatings.
- **In-line production control:** rapid checks before each batch or when changing colour/material on industrial painting lines.
- **Diagnosis of application problems:** identification of out-of-range resistivities as the cause of defects (cratering, poor coverage, loss of transfer efficiency).
- **Compatibility with OEM systems:** verification that values comply with the specifications of electrostatic equipment manufacturers (Sames, Ransburg, Volstatic, Hursant, NESAG, Straton).

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RESISTIVITY

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BY NEURTEK

GENERAL FEATURES

Technical specifications

- Measurement range: 100 kΩ – 20 MΩ
- Accuracy:

  0.1 – 0.5 MΩ → ± 3%
  0.5 – 5.0 MΩ → ± 1%
  5.0 – 10.0 MΩ → ± 2%
  10.0 – 20.0 MΩ → ± 3%

- Display: clear, easy-to-read LCD screen.
- Power supply: 1 x 9 V battery.
- Measurement signal: 45 V.
- Low battery indicator: yes.
- Auto-ranging function: covers the entire resistivity range without manual adjustments.

Physical dimensions

- Unit: 100 × 200 × 30 mm
- Probe: 230 mm × Ø 42 mm

Key features

- Digital, compact and easy-to-use model.
- Immersion probe with protection to prevent erroneous readings caused by excess liquid.
- Fast (10 s) and reliable results displayed on screen.
- Robust and durable construction, suitable for demanding industrial environments.
- Traceable calibration available (optional, certificate SER-CT007)..

INSTRUCTIONS FOR USE

Operating procedure

1. **Switch on the device**: turn on the instrument and check the battery level on the display.
2. **Prepare the sample**: shake the liquid to be measured to ensure a homogeneous and representative sample.
3. **Immerse the probe**: insert the probe into the paint or solvent until the metal part is completely covered, without exceeding the protective side groove.
4. **Wait for the reading to stabilise**: wait for approximately 10 seconds until the reading on the display stabilises.
5. **Press the measurement key**: press the "*" key to confirm and record the resistivity value in MΩ.
6. **Read and record**: note down the value shown on the display and compare it with the reference values for the electrostatic application system used (see equivalence table).
7. **Clean the probe**: rinse the probe with clean solvent after each measurement to prevent cross-contamination between samples.

EQUIVALENCES

Includes a correlation table between resistivity values and parameters for various electrostatic application systems (NESAG, Straton, Sames, Volstatic, Hursant, Ransburg), facilitating their integration into different production processes.

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EQUIVALENCE TABLE

NESAG (Megaohms)	STRATON-SAMES	VOLSTATIC HURSANT (Megaohms)	RANSBURG ((kilo-ohms)
0.2	0.6	0.4	9
0.5	1.5	0.2	22
0.7	2.1	0.3	31
1	3	0.4	44
1.5	4.5	0.6	66
1.7	5	0.7	74
2	6	0.8	88
3	9	1.2	131
4	12	1.6	175
5	15	2	219
6	18	2.4	263
7	21	2.8	306
8	24	3.2	350
9	27	3.6	394
10	30	4	438
10.3	30.9	4.1	450
11	33	4.4	481
12	36	4.8	525
12.5	37.5	5	547
13	39	5.2	569
14	42	5.6	613
15	45	6	656
16	48	6.4	700
16.7	50	6.7	731
17	51	6.8	744
18	54	7.2	788
18.2	54.6	7.3	800
19	57	7.6	831
20	60	8	875

MODELS

Resistek Digital Resistivity Meterk

ASTM D5682

Code	Model
NK-RE4500	RESISTEK Digital Resistivity Meter

Supplied wi: Main unit, Probe, Carrying case

Optional calibration	Code	Description
✓	SER-CT007	Traceable calibration certificate

ACCESSORIES

Code	
NKRE4500-01M	0.1M standard resistor for RESISTEK resistivity meter.
NKRE4500-1M	1 M standard resistor for RESISTEK resistivity meter

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