



TORONTECH



INK RUB TESTER

Ink Rub Tester - ToronIRT™ 20

Ink Abrasion and Rub Resistance Tester for Printed Packaging

The ToronIRT™ 20 is an ink rub tester that measures the abrasion and rub resistance of inks and coatings on printed materials. A weighted rub block presses two surfaces together and moves back and forth under a set load, and the ink transfer and scuffing after a set number of rubs shows how well the print resists abrasion. It handles ink layers and photosensitive (PS) coatings.

The ToronIRT™ 20 applies a 20 N rub load at 43 cycles per minute over a 155 by 50 mm rub area, and the rub count is set anywhere up to 9999. The load block resets automatically before each test, so every run starts the same way. A touchscreen sets the load count and runs the test.

The ToronIRT™ 20 (Ink Abrasion and Rub Resistance Tester for Printed Packaging) suits printing, packaging, and coating labs that check print durability. It flags poor abrasion resistance, ink flaking, and weak coating hardness before a run ships. The embedded system supports remote maintenance, and the instrument runs quietly on the bench.

APPLICATIONS

Ink Rub Tester - ToronIRT™ 20 Applications

The ToronIRT™ 20 measures how well printed inks and coatings resist rubbing across packaging and print production.

- **Printed Cartons and Packaging:** measures the rub resistance of printed folding cartons and packaging.
- **Labels and Printed Films:** checks how well label and film inks resist scuffing and rub-off.
- **Coated Paperboard:** tests the abrasion resistance of coated and printed paperboard.
- **Ink and Coating Development:** compares rub resistance across inks, varnishes, and coatings.

- **Photosensitive (PS) Coatings:** measures the abrasion resistance of PS-coated surfaces.
- **Print Durability QC:** verifies that printed surfaces survive handling and shipping.
- **Varnish and Overprint Evaluation:** checks whether a protective varnish improves rub resistance.
- **Incoming and In-Process QC:** verifies print durability against specification.



FEATURES

Ink Rub Tester - ToronIRT™ 20 Key Features

The ToronIRT™ 20 uses a controlled-load weighted rub block with touchscreen control for repeatable rub testing.

- **Rub Abrasion Method:** measures ink and coating rub resistance by rubbing surfaces under a set load.
- **Controlled Rub Load:** a 20 ± 0.2 N load presses the surfaces together for consistent testing.
- **Steady Rub Speed:** a 43 cycle-per-minute stroke keeps the test repeatable.
- **Programmable Rub Count:** the rub count is set anywhere up to 9999.
- **Auto Load-Block Reset:** the load block resets to a fixed start position before each run.
- **Ink and PS Coatings:** tests ink layers and photosensitive coatings on printed materials.
- **Touchscreen Operation:** a color TFT touchscreen sets the load count and runs the test.
- **Quiet Operation:** the instrument runs quietly on the bench.
- **Remote Maintenance:** the embedded system supports remote maintenance and firmware upgrades.

THEORY & METHOD

Theory and Method

Printed inks and coatings must survive the rubbing they meet in handling, shipping, and use, or they scuff, smear, and rub off. The rub test measures this by rubbing one printed surface against another under a set load and counting how the ink holds up. A weighted block presses the specimens together and moves back and forth for a set number of strokes.

After the set number of rubs, the two surfaces are examined for ink transfer, scuffing, and loss of print. The amount of ink that rubs off, and any smudging on the receiving surface, shows how well the ink and coating resist abrasion. A controlled

load and a steady stroke speed keep the test repeatable.

The load block resets to a fixed start position before each run, so every test begins the same way. Setting the load and the number of rubs to match the end use, such as a shipping carton or a retail pack, gives a fair comparison. The result flags poor abrasion resistance, ink flaking, and weak coating hardness before a print run ships.

TECHNICAL SPECIFICATIONS

Ink Rub Tester - ToronIRT™ 20 Technical Specifications

Parameter	Specification
Rub Pressure	20 ± 0.2 N
Rub Speed	43 cycles per minute
Rub Area	155 mm (L) × 50 mm (W)
Rub Count	0 to 9999
Specimen Size	230 mm (L) × 50 mm (W)
Dimensions	255 mm (L) × 235 mm (W) × 370 mm (H)
Voltage	AC 220 V, 50 Hz (110V is also available)
Net Weight	25 kg

Standard Delivery

Item	Description
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Main Unit	Rub and abrasion resistance test instrument with touchscreen
Load Block	Standard weighted rub block

Optional Accessories

Item	Description
Non-Standard Load Block	Custom-weight rub block for specific loads



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