

ROLLING BALL TACK TESTER



Rolling Ball Tack Tester - ToronRBTT™ 3121

Adhesive Tack Tester (Rolling Ball Method)

ToronRBTT™ 3121 is a rolling ball tack tester that measures the initial tack of pressure-sensitive adhesives and tapes by the rolling-ball method. A steel ball rolls down an inclined ramp onto a horizontal adhesive surface, and the distance it travels before stopping gives a measure of tack. A shorter distance means a tackier surface.

The ToronRBTT™ 3121 uses an inclined plane with an adjustable angle from 0 to 90°, so the ramp can be set to suit different adhesives. A range of steel balls, from 1/32 inch to 1 inch, covers different tack levels. The method is simple, quick, and most appropriate for comparing low-tack adhesives.

The ToronRBTT™ 3121 (Adhesive Tack Tester, Rolling Ball Method) suits pressure-sensitive tape, label, and adhesive labs that check initial tack. The compact benchtop unit needs no power to run the test, and a set of steel balls and a storage box come with the instrument. It offers a repeatable way to rank the tack of coated adhesive surfaces.

APPLICATIONS

Rolling Ball Tack Tester - ToronRBTT™ 3121 Applications

The ToronRBTT™ 3121 measures the initial tack of coated adhesive surfaces across tape and label production.

- **Pressure-Sensitive Tapes:** measures the initial tack of adhesive tapes for consistent grab.
- **Self-Adhesive Labels:** checks the tack of label adhesives before and during production.
- **Low-Tack Adhesives:** ranks the tack of low-tack and removable adhesives, where the method fits best.
- **Adhesive Development:** compares tack across adhesive formulations during development.

- **Protective and Masking Films:** measures the tack of protective films and masking tapes.
- **Coating and Converting QC:** verifies adhesive tack in coating and converting operations.
- **Incoming Inspection:** checks the tack of incoming adhesive materials against specification.
- **Quality Control:** ranks adhesive tack batch to batch for consistent performance.



Standards

The ToronRBTT™ 3121 is designed to align with internationally recognized standards for rolling-ball tack testing of pressure-sensitive adhesives.

- ASTM D3121 - Standard Test Method for Tack of Pressure-Sensitive Adhesives by Rolling Ball
- JIS Z0237 - Testing Methods of Pressure-Sensitive Adhesive Tapes and Sheets

FEATURES

Rolling Ball Tack Tester - ToronRBTT™ 3121 Key Features

The ToronRBTT™ 3121 uses a simple inclined-plane rolling-ball setup for fast, comparative tack testing.

- **Rolling-Ball Method:** measures initial tack from the distance a steel ball rolls across the adhesive.
- **Adjustable Ramp Angle:** the inclined plane sets from 0 to 90° to suit different adhesives.
- **Range of Steel Balls:** balls from 1/32 inch to 1 inch cover different tack levels.
- **Best for Low-Tack Adhesives:** the method is most appropriate for comparing low-tack surfaces.
- **Wide Test Plate:** a 130 mm plate with a 100 mm test width holds the adhesive strip.
- **Simple Operation:** the test is quick and needs no force measurement or power.
- **Compact Benchtop Design:** a light, compact frame fits any bench.
- **Complete Ball Set:** a set of steel balls, a storage box, and tweezers come with the instrument.

THEORY & METHOD

Theory and Method

Tack is the property that lets an adhesive grab a surface on light, brief contact. The rolling-ball method gives a simple, comparative measure of that initial grab. A clean steel ball is released from the top of an inclined ramp and rolls down onto a horizontal strip of the adhesive under test.

As the ball reaches the adhesive, the tack slows it down, and it comes to rest after a short distance. The distance the ball travels across the adhesive is the rolling-ball tack value. A tackier adhesive stops the ball sooner, giving a shorter distance, while a less tacky surface lets it roll farther.

The ramp angle sets the speed and energy the ball carries onto the adhesive, and a steeper ramp or a heavier ball suits higher-tack surfaces. Because the test is quick and needs no force measurement, it is well suited to ranking and comparing adhesives, and it works best on lower-tack materials.

TECHNICAL SPECIFICATIONS

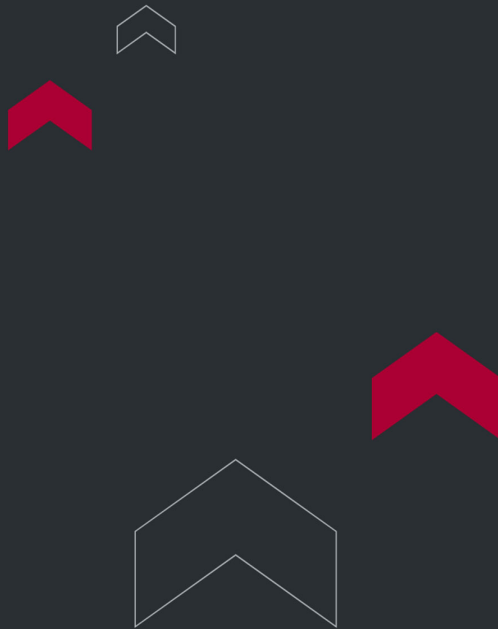
Rolling Ball Tack Tester - ToronRBTT™ 3121 Technical Specifications

Parameter	Specification
Adjustable Angle	0 to 90°
Plate Width	130 mm
Test Width	100 mm
Ball Size	1/32 inch to 1 inch
Dimensions	372 mm (L) × 167 mm (W) × 90 mm (H)

Parameter	Specification
Net Weight	6 kg

Standard Delivery

Item	Description
Main Unit	Inclined-plane rolling-ball tack test stand
Steel Balls	Set of steel balls in graduated sizes
Steel Ball Box	Storage box for the steel balls
Tweezers	Tweezers for handling the balls



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