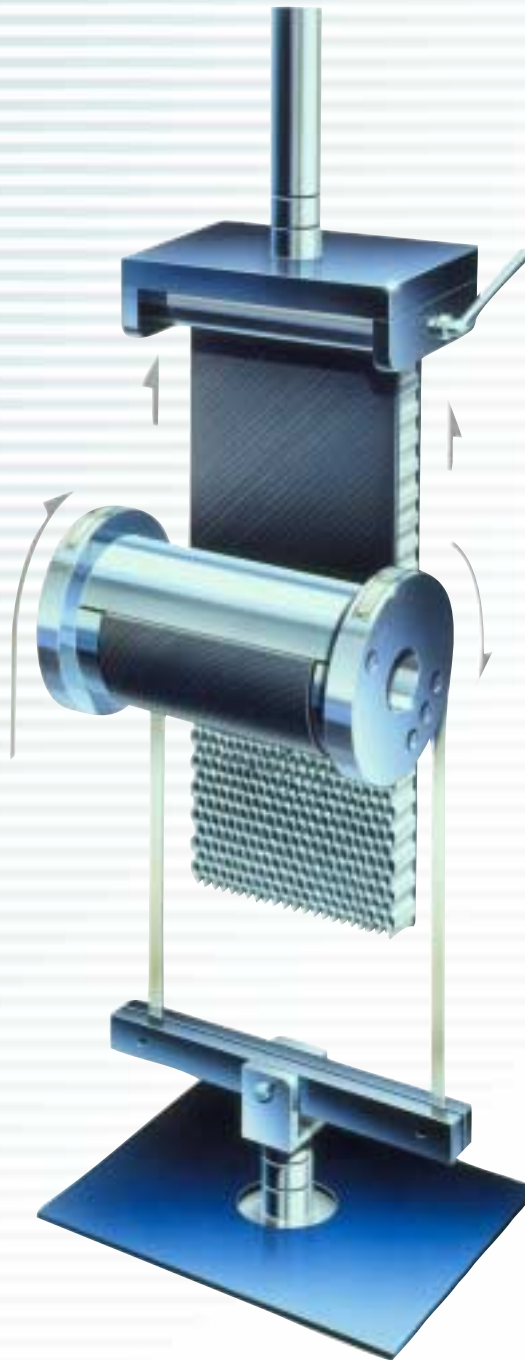


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FRICITION, PEEL, PAPER & ADHESION



SPECIFICATION
SS-MT-6407-0101
January 2001

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TG38: 90° Peel Strength Jig

Description

Mechanical Self Adjusting Sliding Bed Jig for 90° peel tests. The test plate can be moved freely in a horizontal position when the pressure sensitive material is removed in order to maintain a 90° angle of peel. A motorised version is also available. Note: The test plate must be provided by the customer. The FINAT standard states that plate glass should be used, but that stainless steel or aluminium can be used provided this is stated alongside the results.

Specification

| | | |
|--------------------|----------|---------|
| Maximum Capacity | 200 N | 45 lbf |
| Minimum Load Cell | 20 N | 4.5 lbf |
| Max Sample Width | 85 mm | 3.35 in |
| Eye End Diameter | 15.85 mm | 0.62 in |
| Weight - Top Clamp | 0.8 Kg | 1.76 lb |
| Temperature Limits | Ambient | |

Applications

Peel tests on a wide range of materials, eg: sealing tape, labels, laminated coatings, etc. Measuring peel adhesion at 90° normally gives a lower recorded value than at 180° and allows values to be measured for materials, normally giving paper tear. Peel adhesion is defined as the force required to remove pressure sensitive coated material, which has been applied to a standard test plate under specified conditions, from the plate at a specified angle and speed. This Jig is similar to that used in tests BS 5350: Part C10 and FINAT test method no.2 (FTM 2) - Peel adhesion (90°) at 300mm per minute



TG35: Coefficient of Sliding Friction Jig

Description

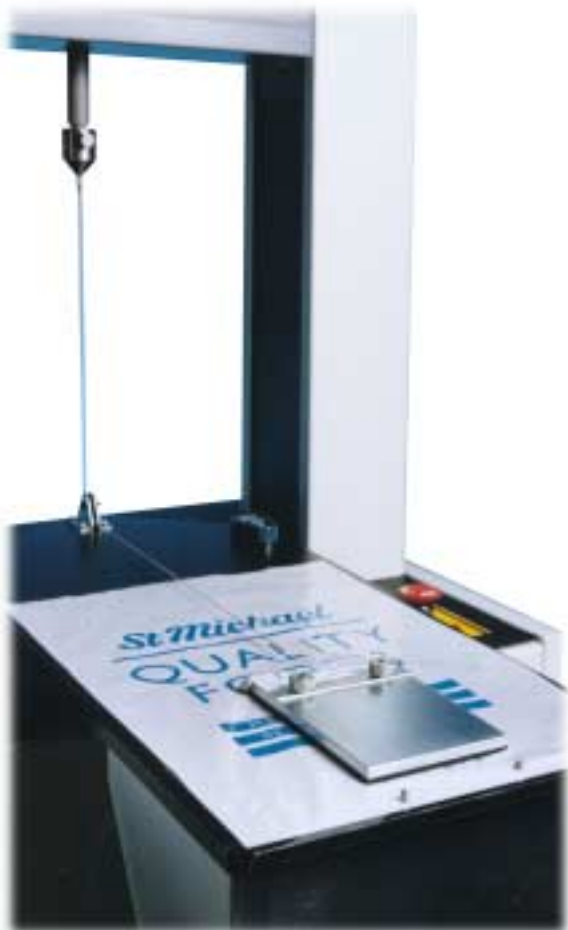
Coefficient of Sliding Friction Jig. It consists of a horizontal flat bed incorporating a suitable clamping device and a sled, the underside of which is covered with a layer of smooth-faced foam rubber of medium apparent density.

Specification

| | | |
|--------------------|---------------|---------------------|
| Maximum Capacity | 100 N | 22.5 lbf |
| Minimum Load Cell | 5 N | 1.12 lbf |
| Bed Width | 300 mm | 11.8 in |
| Bed Length | 600 mm | 23.6 in |
| Eye End Diameter | 15.85 mm | 0.62 in |
| Sled Weights | 200 and 720 g | 0.44 lb and 1.59 lb |
| Temperature Limits | Ambient | |
| Span Adjustment | 10 - 150 mm | 0.39 in - 5.91 in |

Applications

Determination of the static and kinetic coefficients of friction of plastic film and paper when sliding over itself under controlled test conditions. A sheet of plastic film/paper is clamped to a horizontal bed and a similar film/paper is clamped to the underside of a sled. The force required to overcome the frictional resistance between the two imposed surfaces, when one is moved relative to the other along their plane of contact, is measured. The static coefficient of friction is determined by the force required to overcome the initial resistance between the two surfaces and the kinetic coefficient of friction is determined from the subsequent force when continuous sliding at a constant rate of movement is sustained.



TG72: Finch Device for Tensile Testing of Wet Paper

Description

The object of this device is firstly to enable tensile tests to be carried out immediately after short soaking periods and secondly to avoid the difficulty of handling wet test pieces of low strength. It consists of a rigid inverted metal stirrup with a horizontal rod attached to it. Between the metal straps which form the framework of the stirrup is a small, easily removable container for holding water. Spring clips hold the container in position and also enable it to be slid up and down and to be left in either the raised or the lowered position. A metal tongue at the bottom of the apparatus permits the device to be fastened securely in the lower clamp of the tensile tester. Note: The upper grip shown here is a TG34 and must be ordered separately.

Specification

| | | |
|--------------------|----------|----------|
| Maximum Capacity | 10 kN | 2200 lbf |
| Minimum Load Cell | 100 N | 23 lbf |
| Max Sample Width | 25 mm | 1.0 in |
| Eye End Diameter | 15.85 mm | 0.62 in |
| Weight Each | 2 Kg | 4.4 lb |
| Length Each | 115 mm | 4.53 in |
| Temperature Limits | Ambient | |

Applications

Loop tensile testing of wet paper or board. Wet tensile strength is defined as the maximum force that a test piece of paper or board will stand, after soaking in water, before it breaks under specified conditions. Wet strength retention is defined as the ratio of the value of the tensile strength of a paper or board in the wet state to that of the same paper or board in the dry state, measured under the specified conditions.



TG580: Climbing Drum Peel Test Jig

Description

The peeling jig consists of a flanged drum and flexible loading straps or cables. A drum clamp is used to hold the adherent against the face of the drum. The drum is balanced about the axis by the use of counter weights placed diametrically opposite the drum clamp to compensate for the mass of this clamp.

Specification

| | | |
|--------------------|----------|-----------|
| Maximum Capacity | 2.5 kN | 550.0 lbf |
| Minimum Load Cell | 1 kN | 225.0 lbf |
| Max Sample Width | 100 mm | 4.0 in |
| Eye End Diameter | 15.85 mm | 0.62 in |
| Temperature Limits | Ambient | |

Applications

Determination of the resistance of joints to perpendicular peel stresses on the adhesive layer. Applicable to the testing of joints between an outer metal sheet and the core of sandwich assemblies, e.g.: honeycomb or other composites. In the climbing drum peel test the adherents are separated steadily by the action of a revolving drum which rotates by the application of a tensile force applied by a tensile testing machine. Peel Strength is defined as the force required to separate the two members of a bonded test piece of specified dimensions over the adhered surfaces, under the specified conditions of test.



TG136: Shouldered Grip for Tension Tests on Adhesives

Description

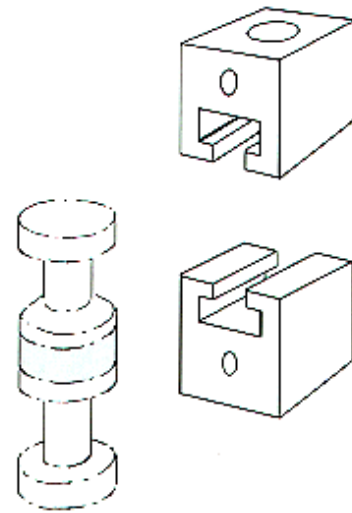
Shouldered grips to hold sample "dollys" between two base plates located in self centering 'T' slots. Supplied with 5 pairs of adhesive plates 50 x 50 mm.

Specification

| | | |
|--------------------|----------|-----------|
| Maximum Capacity | 5 kN | 22481 lbf |
| Minimum Load Cell | 500 N | 112 lbf |
| Max Sample Area | 50 mm | 1.97 in |
| Eye End Diameter | 15.85 mm | 0.62 in |
| Weight Each | 5.75 Kg | 12.7 lb |
| Temperature Limits | Ambient | |

Applications

Determining the adhesion of adhesives, sealants and mastics by measuring the minimum tensile stress necessary to detach or to rupture the coating. Designed to meet ISO 4624-1978 and BS3900:Part E10:1979 (pull off test for adhesion)



ORDERING INFORMATION

| Model | Part No. | Description |
|-------|----------|--|
| TG38 | 01/1907 | 90° Peel Strength Jig |
| TG35 | 01/1173 | Coefficient of Sliding Friction Jig |
| TG72 | 01/1507 | Finch Device for Tensile Testing of Wet Paper |
| TG580 | 01/1818 | Climbing Drum Peel Test Jig |
| TG136 | 01/1584 | Shouldered Grip for Tension Tests on Adhesives |



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