

POCKET GONIOMETER PG-1

The PG concept

A pocket goniometer measures the contact angle, which appears at the interface between a liquid droplet and a substrate surface.

The contact angle is commonly used to understand how a liquid and a substrate surface interact with each other. In our daily lives we are often exposed to contact angle phenomena similar to these situations :

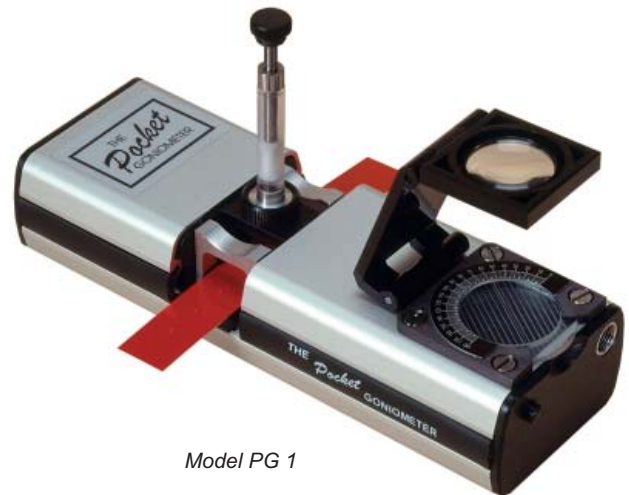
- why rain drops “bead up” on a waxed car
- why an egg does not stick in a “non-stick” frying pan
- why a glue might not always repair a broken cup
- how the rain droplets can stay on the outside of the tent roof
- how a wet diaper can remain dry against the skin

The pocket goniometer PG-1 is a battery-operated instrument for laboratory and field applications related to gluing, printing and surface related problems. It is an ideal tool to reveal contamination of a specimen as well as the effect from cleaning or surface treatments.

The droplet image is projected on the built-in screen equipped with an adjustable protractor and an optional eyepiece for additional magnification.

The PG-1 is also ideal for introduction of the contact angle concept.

The contact angle approach is a robust method, established long time ago. By placing a liquid droplet on a specimen surface a contact angle is formed at the contact area. By definition, a droplet which “beads up”, is non-wetting and a contact angle higher than 90° is displayed. When the droplet “wets out” across the surface, wetting is obtained and the contact angle is less than 90° .



Model PG 1

Features

- Measures the wetting behaviour between a liquid and a solid material
- Very small size easily carried in the pocket

Cardboard, Paper, Plastics

Physical specifications

Dimensions

16 x 5.5 x 4 cm (LxWxH)

Net Weight

350 gr

Options

- Miniature dispensing unit

Standards

TAPPI T-458, ASTM D724, ASTM D5946

Applications

Printing - Agriculture - Paper - Detergents - Corona treatment - Coating - Pharmacy - Board - Inks - Flame treatment - Adhesion - Biomedicine - Wood - Oils - Surface sizing - Cleaning - Papermaking - Metals - Surfactants - Surface tension - Absorption - Cosmetics - Plastic - Water - Surface contamination - Wettability - Dentistry - Textile - Solvents - Surface energy