

## Dyne Pens, Surface Energy Test Pens, Surface Tension Test Pens

A complete range of dyne pens to measure surface energy referred to as surface tension

The unit of measurement of Surface Energy is Dyne/cm<sup>2</sup> this can also be expressed in mN/m.

Dyne = Unit of force equal to the force that imparts an acceleration of 1cm/sec/sec to a mass of 1 gram.

1 Dyne/cm<sup>2</sup> = 0.00001 Newtons.  
or  
1 Dyne/cm<sup>2</sup> = 1mN/m  
or  
1 Dyne/cm<sup>2</sup> = 1 mJ/2

### Various Packs Available

#### Standard Pack (6 pens)

36, 40, 44, 48, 52 & 56mN/m

#### QA Pack (9 pens)

30, 34, 38, 40, 42, 46, 50, 54 & 58mN/m

#### QA+ Pack (12 pens)

30, 34, 36, 38, 40, 42, 44, 46, 48, 50, 54 & 58mN/m

#### Maxi Pack (16 pens)

30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58 & 60mN/m

#### Self Select Pack

Select any quantity of any even number value of pens between 30 & 60mN/m

#### Converter Pack (6 pens)

38, 38, 42, 42, 44, 44mN/m

#### Blownfilm Pack (6 pens)

34, 34, 38, 38, 42, 42mN/m



### Features

- Easy to use
- All values available between 30 - 70mN/m
- Results in less than 3 seconds
- Available for purchase online now
- Most 'even' values available for next day delivery
- Fluid formulation based on ISO 8296
- Valve tip applicator reduces contamination & possible leakage
- Disposable cartridges
- Performs well on most non-absorbent materials

**BUY NOW**

Dyne Technology supplies a complete range of Dyne Pens to measure surface energy. Using a Dyne test pen gives quick and easy results indicating surface wettability. The low surface energy of polymer-based substrates often leads to poor adhesion of inks, glues and coatings. To obtain optimum adhesion, it is necessary to increase the surface energy of the substrate to just above that of the material to be applied.

Measuring surface energy can be achieved by measuring contact angle or by use of surface energy test pens, corona test pens, corona pens, surface tension pens sometimes referred to as sherman pens and are used for surface energy testing. The fluid contained within dyne pens is based on the ISO 8296 method for measuring the surface energy of polyethylene film.

The results of the Dyne pens are immediate. When the Dyne level test pen is applied to the surface, the liquid will either form a continuous film on the surface or pull back into small droplets. If the Dyne test fluid remains as a film for 3 seconds, the substrate will have a minimum surface energy of that ink value, expressed in mN/m (Dynes). Should the Dyne test liquid reticulate or draw back into droplets in less than 1 second then the surface energy of the substrate is lower than that of the liquid itself. The exact surface energy (Dyne level) can be determined by applying a range of increasing or decreasing values of Dyne test pens.

The Dyne test pens are based on a valve tip applicator and the principle is simple: Keep the testing part of the pen away from the fluid storage part of the pen (in other words, you get no wicking of contaminants from the substrate into the test fluid reservoir). By pressing the tip firmly down, the valve is opened and fresh fluid floods the tip; this flushes it clean, and allows the tester to lightly pass over the sample to accurately determine dyne level. Results are based on how long the test solution takes to form beads on the sample surface.

Surface Treatment with either Corona or Plasma results in good wetting of the material over the surface of the substrate and so improves adhesion. For optimum adhesion when printing, gluing or coating on various substrates, it is necessary to obtain a high surface energy.

**For further information click here**

**For a quotation please call our Sales Team now on: +44(0)1543 411460**