



## Dynes Pen / Ink

**ELTECH ENGINEERS PVT LTD**, established in 1992 is an ISO 9001:2015 certified Indian Company engaged in the manufacturing activity of Corona treater, Plasma Treatment Systems, Static Charge Eliminator, Static Chargers, Static Meters, Ionizing Air gun, Blowers etc. Our clients always look up to us for their different requirements because of our high quality standards, superior performance, zero defect products, timely deliveries and very reasonable price.

### About Dynes Pen / Ink

The use of a dyne pen is the quickest and easiest way to control that a plastic substrate has sufficient surface tension for printing, coating and laminating processes. To avoid having to scrap large quantities of substrate with a poor print due to insufficient bonding it is always advisable to check the corona treated material before processing. Using a felt tip dyne pen is an easy and inexpensive way to check if a substrate is ready for processing.



**Corona Dynes Test  
disposable Pens**

**Model : CDP – 100**

Corona disposable pens are available from 30-54 dynes/cm.

Available sizes are 30 dynes/cm, 32 dynes/cm, 34 dynes/cm, 36 dynes/cm, 38 dynes/cm, 40 dynes/cm, 42 dynes/cm, 44 dynes/cm, 48 dynes/cm, 50 dynes/cm, 52 dynes/cm, and 54 dynes/cm.

Corona disposable pens with liquid solution are available from 30-54 dynes/cm.

Available sizes are 30 dynes/cm, 32 dynes/cm, 34 dynes/cm, 36 dynes/cm, 38 dynes/cm, 40 dynes/cm, 42 dynes/cm, 44 dynes/cm, 48 dynes/cm, 50 dynes/cm, 52 dynes/cm, and 54 dynes/cm.



**Corona Dynes Test pen  
with Liquid Solution**



**Corona Dynes Test  
Liquid Solution**

**Model : CLP – 30**

Corona disposable pens with liquid solution are available from 30-54 dynes/cm.

Available sizes are 30 dynes/cm, 32 dynes/cm, 34 dynes/cm, 36 dynes/cm, 38 dynes/cm, 40 dynes/cm, 42 dynes/cm, 44 dynes/cm, 48 dynes/cm, 50 dynes/cm, 52 dynes/cm, and 54 dynes/cm.

## HOW TO MEASURE SURFACE TENSION USING DYNE PENS

The test is carried out by simply running the dyne pen across the material to be processed, producing a line. If the line is continuous, the dyne level is correct – if the line breaks into droplets, the dyne level is incorrect and the surface tension will not be suitable for printing, coating, or laminating.

On a partially treated substrate the ink can also be used to indicate if the correct areas were treated. Our dyne pens are supplied in dyne value range from 32 to 56 dyne/cm in steps of 2 dyne. They can be purchased singly or in packs of 8 in dyne levels of your choice and come with full instructions.

### Dynes/cm or Newton's/meter :

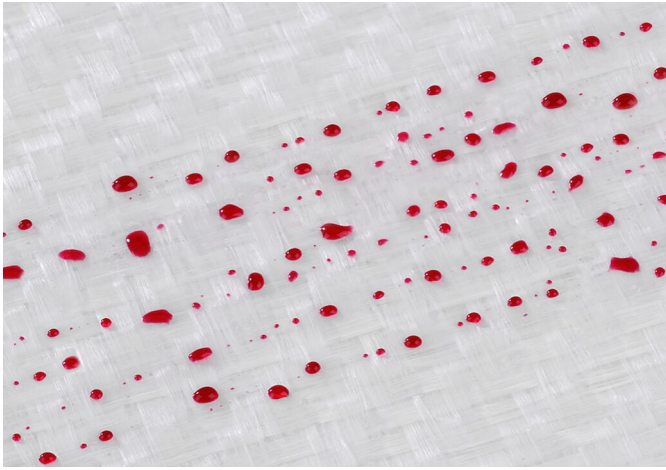
Dynes/cm or Newton's/meter is the unit of force in the centimetre-gram-second absolute system, the force which imparts an acceleration of 1 centimetre per second to a body having a mass of 1 gram.

### Dynes Solution :

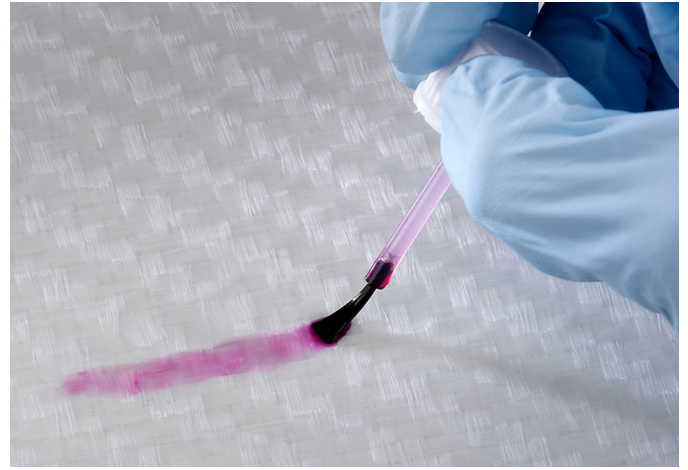
Dyne solutions have been used to measure wetting and predict adhesive potential of plastics and coated paperboard. This method is widely used to test the treatment level of plastic films intended for printing, laminating and coating. Test results are based on how varying surface tension solutions react when applied to a non-absorptive surface: If a given solution wets the surface, its dyne level is lower than the substrate's; if, instead, it rapidly forms beads; its dyne level exceeds that of the substrate. This method offers adequate precision and reliability for most capability studies, materials

### Benefits:

- Easy to use
- Inexpensive method
- Reduces production of scrap material
- Quick and reliable test results
- 3 months durability of dyne pen

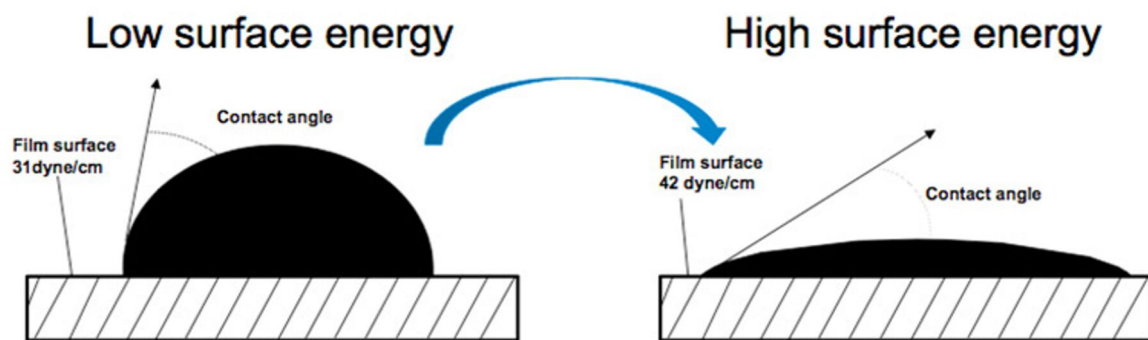


Low Surface Energy



High Surface Energy

## SURFACE ENERGY



**Qualitative ratings of treatment level or wettability:**

Sr. No.	Treatment level in Dynes / cm	Expected Quality rating in terms of print or coating adhesion
1	Below 32	Very poor printing or coating adhesion
2	34	Poor printing or coating adhesion
3	36	Fairly good printing or coating adhesion.
4	38	Good printing or coating adhesion.
5	40	Very good printing or coating adhesion.
6	42	Excellent printing or coating adhesion.



## Recommended Treatment levels

The Following chart offers general guidelines regarding the required surface treatment levels ( as measured by the dyne test) for Various process / Material combinations . All data are indicative only.

	Coating Type:	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV
Substrate	PE <sup>(2)</sup>	38 44	36 40	38 50	40 46	37 42	40 50	40 46	37 42	42 54	42 48	38 44	44 60	42 50	38 44	42 54	42 48	38 45	44 54
	pp <sup>(3)</sup>	38 44	36 40	40 50	40 46	38 42	40 50	40 46	37 42	40 54	42 48	38 44	44 60	42 50	38 44	42 54	42 48	38 45	44 54
	PVC <sup>(4)</sup>	38 44	36 40	36 50	40 45	37 42	36 52	40 45	38 42	40 52	42 48	38 44	42 60	42 50	38 44	42 54	40 48	38 45	42 54
	PET <sup>(5)</sup>	44 52	40 46	42 54	46 56	42 46	44 56	46 56	42 46	46 60	48 60	42 48	44 62	46 60	42 48	44 62	42 52	42 48	46 60
	PS	38 44	35 40	42 48	40 45	37 42	42 50	40 46	38 44	42 58	42 48	38 44	42 56	42 52	37 44	42 54	42 50	38 46	44 54
	PVDC	40 46	38 42	42 52	42 46	40 42	42 52	42 48	38 44	42 54	42 50	40 45	42 58	42 50	38 44	44 52	42 48	40 46	44 54
	PU	40 46	38 42	38 50	40 46	38 42	38 52	40 45	38 44	42 56	42 50	38 44	42 58	42 50	38 44	42 56	42 48	38 46	44 54
	ABS	42 46	40 44	40 52	42 46	40 45	42 52	42 48	38 46	45 52	42 48	40 45	46 56	42 52	40 45	42 56	42 48	38 46	44 54
	PTFE	40 44	34 39	36 52	40 45	35 40	38 52	40 48	38 44	42 60	42 52	38 46	42 60	42 56	38 46	42 56	42 50	40 48	42 54
	Silicone	40 44	35 40	40 50	40 45	38 42	38 52	40 48	38 44	40 56	42 50	38 46	42 60	42 56	38 46	42 56	42 50	40 48	42 54



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