

# MAGNET

## DYNE VALUE CHECK PEN

# IMAGETECH INDUSTRIES



+91-8448441345

+91 8448336036



Dyne Test Pens are a cost effective, quick and easy method to measure surface wetting or surface energy. Sometimes known as corona test pens the Dyne Test Pen is a simple method of determining the surface energy of most polymer based materials.

Dyne test solutions are often used during plasma surface modification, corona surface treatment and flame treatment to determine the surface energy level and cleanliness of a substrate, specially within industries such as packaging and converting, automotive, aerospace, medical device manufacturing etc.

These Dyne pen and Dyne Solution is used for Quality control Process.

**Magnet Dyne Value Test Pen are manufactured as per ASTM D2578-17 Standards**

**Our Checking Standards As per ASTM -D 971-20**

**Dyne Value Range : 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 46, 48, 50, 52, 54 & 56 Dyne/cm  
58, 60, 62, 64, 66, 68, 70, 72 Dyne/cm**

**Special Value Range :31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53 Dyne/cm**

### Test Procedure Guidelines

1. Place the sample on a clean, level surface. If necessary, anchor the edges to avoid curling or other deformation.
2. Record ambient temperature and relative humidity. If sample temperature differs from ambient, allow it to stabilize.
3. Test at least three points across the sample; 1/4, 1/2, and 3/4 across the film section. It is good practice to test the outer edges as well.
4. Do not touch or contaminate the surface to be tested, dirty surfaces lose their wettability, therefore clean the test level area.
5. Do not use contaminated or outdated pens.
6. Store and use pens at room temperature





**How To use & Measuring Surface Energy / Tension**

1. The test is carried out by simply marking the line over the substrate/material to be used or processed, if the line remains intact exactly for 4 seconds before peripheral shrinkage takes place, the dyne level of the substrate is same as of dyne value of Magnet Dyne Test Pen
2. If the marked line turns into droplets immediately, that means the dyne value of the substrate/ material is lesser than the dyne value of the Magnet dyne Test Pen used. (To know the exact dyne value, use lower dyne value of Magnet dyne Pen & so on to reach the exactness.)
3. If the marked Line do not breakes into droplets (peripheral Shrinkage) after 4 seconds that means the dyne value of the material of the substrate is higher than the dyne value of the Magnet dyne Test Pen Used. (To know the exact. dyne value, use higher dyne value of Magnet dyne Pen & so on to reach the exactness.)
4. Do not repeat the test on the same area of material/substrate
5. The correct dyne level will be equal to the marked line that remains exactly intact for 4 Seconds before droplets or Peripheral Shrinkage Occurs.

**SUGGESTED TREAT LEVELS**

		Printing Processes									Other Processes									
Process:		Flexo and Gravure			Litho			Offset/Letterpress			Screen and Pad			Laminating			Coating			
Substrate	Coating Type:	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV	Water	Solvent	UV	
PE		38	36	38	40	37	40	40	37	42	42	38	44	42	38	42	42	38	44	
		44	40	50	46	42	50	46	42	54	48	44	60	50	44	54	48	45	54	
	PP		38	36	40	40	38	40	40	37	40	42	38	44	42	38	42	42	38	44
			44	40	50	46	42	50	46	42	54	48	44	60	50	44	54	48	45	54
	PVC		38	36	36	40	37	36	40	38	40	42	38	42	42	38	42	40	38	42
			44	40	50	45	42	52	45	42	52	48	44	60	50	44	54	48	45	54
	PET		44	40	42	46	42	44	46	42	46	48	42	44	46	42	44	42	42	46
			52	46	54	56	46	56	56	46	60	60	48	62	60	48	62	52	48	60
	PS		38	35	42	40	37	42	40	38	42	42	38	42	42	37	42	42	38	44
			44	40	48	45	42	50	46	44	58	48	44	56	52	44	54	50	46	54
PVDC		40	38	42	42	40	42	42	38	42	42	40	42	42	38	44	42	40	44	
		46	42	52	46	42	52	48	44	54	50	45	58	50	44	52	48	46	54	
PU		40	38	38	40	38	38	40	38	42	42	38	42	42	38	42	42	38	44	
		46	42	50	46	42	52	45	44	56	50	44	58	50	44	56	48	46	54	
ABS		42	40	40	42	40	42	42	38	45	42	40	46	42	40	42	42	38	44	
		46	44	52	46	45	52	48	46	52	48	45	56	52	45	56	48	46	54	
PTFE		40	34	36	40	35	38	40	38	42	42	38	42	42	38	42	42	40	42	
		44	39	52	45	40	52	48	44	60	52	46	60	56	46	56	50	48	54	
Silicone		40	35	40	40	38	38	40	38	40	42	38	42	42	38	42	42	40	42	
		44	40	50	45	42	52	48	44	56	50	46	60	56	46	56	50	48	54	





**THIRD PARTY TEST REPORTS**



Format No: SALLGN/TRF/GEN

Issue No:01, Issue Date: 01-04-2017

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**TEST REPORT**

Test Report Issued To:

**IMAGETECH INDUSTRIES**

RZ-I-13, NANDA BLOCK,  
MAHAVIR ENCLAVE,  
NEW DELHI, DELHI - 110045,  
INDIA

Test Report No: D220418042/D220418042-10

Date of Issue: 28-Apr-2022



Sample Booking/Receipt Date: 18-Apr-2022

Date of Start of Testing: 26-Apr-2022

Date of Completion of Test: 28-Apr-2022

Customer Relationship Number 68738

**Sample Description :**

CHEMICAL SAMPLE OF 38, 40, 42, 44, 46, 48, 50, DYNE/CM



**Customer Reference No :**

Kind Attention : MR.VIJAYAN

E-Mail: imagetechindustries@gmail.com

Contact No: 8448441345

Sample Condition : Good

Sample Quantity (Approx) : 7

Sample Size (Approx) : NA - ml

SAMPLE NOT DRAWN BY OUR LABORATORY. THE RESULTS RELATE ONLY TO THE ITEMS TESTED

Digitally signed  
by ARCHANA  
DUBEY  
Date: 2022.04.28  
16:47:36 +05:30

Report Issued by

This is a Digitally Signed Report and hence doesn't require Physical Signature.

Spectro Analytical Labs Pvt. Ltd. S-1, GNEPIP, Surajpur Industrial Area,Phase-V, Kasna, Greater Noida-201308 (India)

Phone : +91-120-2341252,2341251 || URL : www.spectro.in || Email: care@spectro.in

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**THIRD PARTY TEST REPORTS**



**TEST REPORT**

Format No: SALLGN/TRF/GEN  
 Issue No: 01, Issue Date: 01.04.17

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Report No. D220418042/D220418042-10

Test parameter	Observed result	Test method
Surface tension at 25 °C, 38 dynes/cm	38.2	IS: 6104
Surface tension at 25 °C, 40 dynes/cm	40.1	IS: 6104
Surface tension at 25 °C, 42 dynes/cm	42.2	IS: 6104
Surface tension at 25 °C, 44 dynes/cm	44.2	IS: 6104
Surface tension at 25 °C, 46 dynes/cm	46.2	IS: 6104
Surface tension at 25 °C, 48 dynes/cm	48.3	IS: 6104
Surface tension at 25 °C, 50 dynes/cm	50.4	IS: 6104

---End of the report---

*Satender*

Analyst Signature



Digitally signed  
 by ARCHANA  
 DUBEY  
 Date: 2022.04.28  
 16:17:36 +05:30

Authorised Signator

Spectro Analytical Labs Limited

S-1, GNEPIP, Surajpur Industrial Area, Phase-V, Kasna, Greater Noida-201308 (U)

Phone : +91-120-2341250,2341251 || URL : www.spectro.in || Email: care@spectro.in

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