

Water-Based EnerDyne™ Pens

Enercon's new EnerDyne™ pens feature a water-based formulation for human and environmental safety.

Testing surface energy has never been safer or easier.

Are you achieving the dyne levels you need? Do you know the dyne level of your material prior to treating? Key to any surface treatment application is knowing your starting and ending treatment levels. Enercon's EnerDyne™ pens provide a quick, safe and simple means of testing surface energy.

EnerDyne™ pens are designed to indicate surface treatment levels on polymer based substrates and establish that the material is correctly treated prior to applying inks, coatings, paints or adhesives. Pens are available in 30/32/35/38/41/44/48/56/60/66 dyne levels.



Formamide Free!

EnerDyne™ pens provide easy to read results on all types of surfaces.

Water-Based Dyne Pen Test Procedure:

1. Remove the pen cap and briefly depress the tip on a clean surface until moist.
2. Apply the solution over a test area of approximately one square inch.
3. Note the required time for the applied solution to break into droplets and/or peripheral shrinkage to occur. Read the solution behavior by observing the center area of the applied solution. If the dyne solution does not break into droplets and/or peripheral shrinkage after 4 seconds, repeat the test with the next higher surface tension solution. If the solution breaks into droplets and/or peripheral shrinkage in less than 4 seconds, repeat test with next lower surface tension solution.
4. Do not repeat test on the same area of material.
5. Repeat Steps 1 and 2 until the correct dyne level is determined. The correct dyne level will be equal to the solution that holds for exactly 4 seconds before droplets or peripheral shrinkage occur.
6. As a general guideline surface coverage tension should be approximately 10 dynes higher than ink, adhesive, or coating. This may not be the case for every application.

Incorrect Dyne Level



Correct Dyne Level



General Guidelines:

- Use of excessive solution will result in a false reading.
- Dyne Pens typically have a 6-12 month shelf life.
- Each pen is rated for the minimum dyne level that the ink will determine.
- Surface energy testing should be conducted immediately after treatment (air plasma, flame plasma, chemical plasma, RF gas).
- Treated surfaces are time sensitive and are affected by environmental conditions such as temperature and humidity.
- Do not touch or contaminate the surface to be tested. Dirty surfaces lose their wettability therefore clean test level area.
- Do not use contaminated or outdated pens.
- Store and use pens at room temperature.
- The inks should not be exposed to direct light. Therefore keep them closed when not in use. Also, repeated ink exposure to air, will alter the dyne levels. Properly sealed pens prevent this from occurring.
- Inconsistent or excessive pressure may provide a false dyne level reading.

Note: EnerDyne™ pen testing provides a safe, fast and effective means of testing surface energy.

Surface energy in itself does not guarantee adhesion success.



**Innovative People.
Ensuring Your Surface Treating Success.**

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