



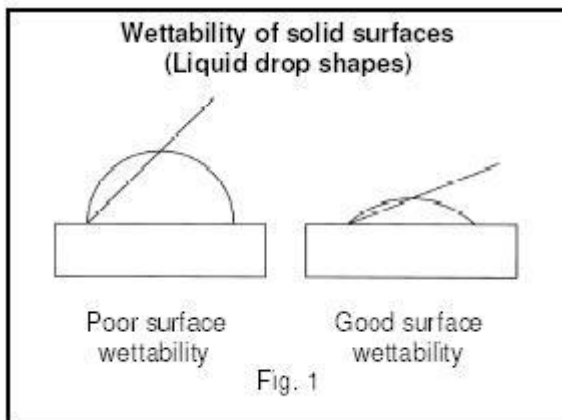
**CERTIFICACION DE CALIDAD CONFORME A LOS PROCEDIMIENTOS DE PRUEBA ASTM
D2578-99A Y DIN 53 364. LOS NIVELES DINAS DE LAS TINTAS DE PRUEBA SON
CERTIFICADAS ISO 9000 Y BS 5750**



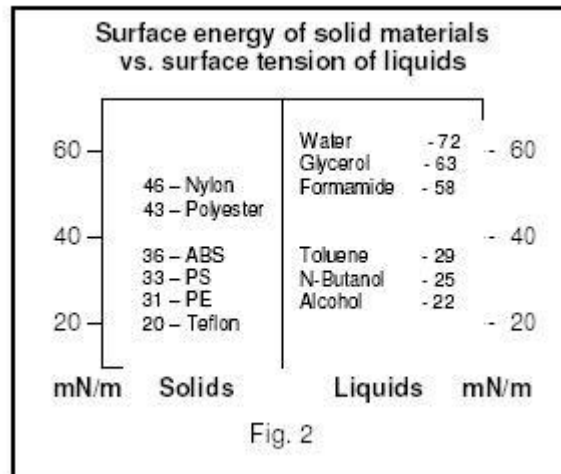
Calidad Certificada http://lineaflexo.com/Marcadores_de_Dinas.html

The Dyne level reflects the surface wettability – the higher the Dyne level, the better the wettability/adhesion. The Dyne is the unit of force equal to the force that imparts an acceleration of 1cm/sec/sec to a mass of 1 gram. 1 dyne (mN/m) = 0.00001 Newtons, or = 1gm/sec², or 1 Newton = 100,000 dynes.

It is often necessary to bond plastic materials to metals or other plastic materials, or simply paint or print onto a plastic surface. In order to successfully accomplish this, the liquid adhesive, paint or ink should be able to wet the surface of the material. Wettability depends on one specific property of the surface: Surface energy. The surface energy of the solid substrate directly affects how well a liquid wets the surface. To achieve good wettability the surface energy of the substrate needs to exceed that of the surface tension of the liquid by around 2 - 10 mN/m (Dynes). Wettability is easily demonstrated by contact angle measurements. The contact angle is the angle between the tangent line at the contact point and the horizontal line of the solid surface (fig 1).



When a liquid droplet is set on a smooth solid horizontal surface, it may spread out over substrate and the contact angle will approach zero if complete wetting takes place. Conversely, if wetting is partial, the resulting contact angle reaches equilibrium in the range material's surface energy and positively affect adhesive characteristics by creating bonding sites. Various methods of measuring wettability are available: Contact Angle Measurement, Dyne inks, Dyne pens etc. The table below sets out typical values for a range of substrates and typically applied liquids (fig 2)



A TENTAMENTE


Roberto Rosendiz

PRINTEX CORPORATION USA