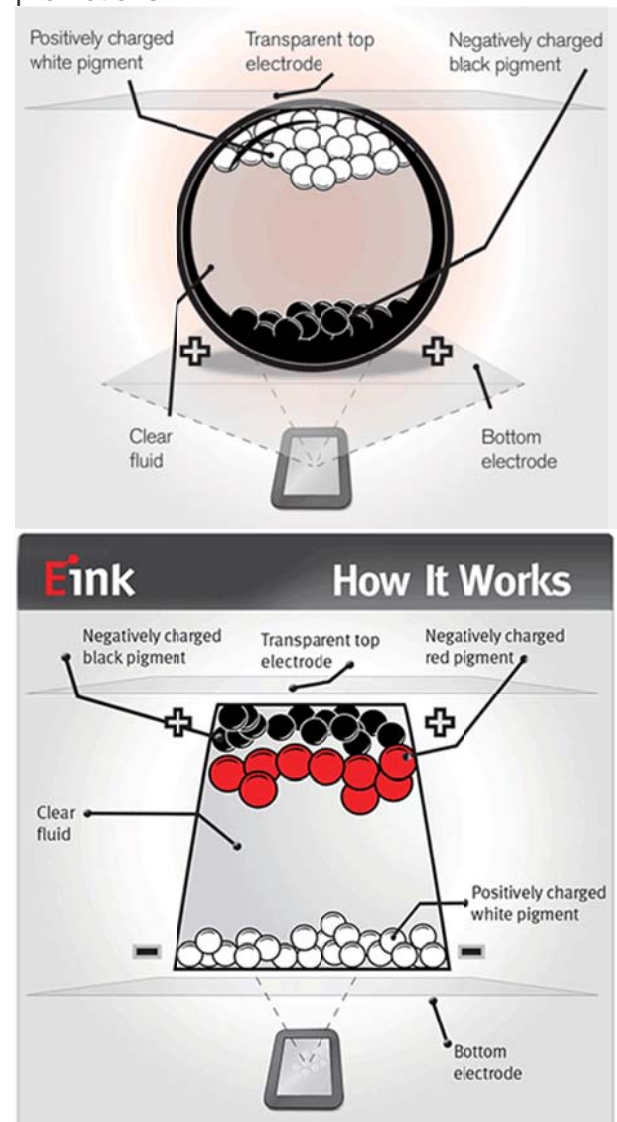


Ink Technology Electrophoretic Ink, explained. E Ink is the creator of electrophoretic, or, electronic ink — the optical component of a film used in Electronic Paper Displays (EPD). Although futuristic-sounding, electronic ink is actually a straightforward fusion of chemistry, physics and electronics. It's so much like paper, it utilizes the same pigments used in the printing industry today. What is a Bistable Display? E Ink's technology is commonly referred to as "bistable". What does this mean? Bistable means that the image on an E Ink screen will be retained even when all power sources are removed. In practice, this means that the display is consuming power only when something is changing. For example, when reading on an eReader, power is only needed when turning to a new page but no power is consumed by the display while reading the page. This is most noticeable when an eReader goes into sleep mode yet there is still an image being displayed. By contrast, with a traditional LCD, the display is needs to be refreshed around 30X per second, regardless of the whether anything new is being displayed. Bistability significantly reduces the power consumption of displays using E Ink and is a key reason eReaders have such long battery life. Reflective Displays E Ink displays are also referred to as "reflective displays." In an LCD, or "emissive display", light from a backlight is projected through the display towards your eyes. In an E Ink display, no backlight is used; rather, ambient light from the environment is reflected from the surface of the display back to your eyes. As with any reflective surface, the more ambient light, the brighter the display looks. This attribute mimics traditional ink and paper, and users of E Ink displays have said that they do not have the same eye fatigue as with LCDs when reading for long periods of time. The backlight can also consume up to 40% of the power used in electronic product. Therefore, eliminating the need for a backlight significantly increases the battery life versus using a traditional LCD. The Ink - 2 Pigment System Electronic ink is made up of millions of tiny microcapsules, about the diameter of a human hair. Each microcapsule contains positively charged white particles and negatively charged black particles suspended in a clear fluid. When a positive or negative electric field is applied, corresponding particles move to the top of the microcapsule where they become visible to the viewer. This makes the surface appear white or black at that spot. Click here for more detail on how our monochrome ink works. Three Pigment Ink System Spectra is our 3-pigment ink offering, engineered specifically for Electronic Shelf Labels (ESL). It works

similarly to dual pigment system, in that we apply a charge to our pigments, and to a top and bottom electrode to facilitate movement. However, Spectra is utilizing a microcup ink structure. Click here for more detail on how Spectra works. Spectra for ESL By using electronic shelf labels (ESL) with E Ink's technology, retailers have the ability to change pricing strategies as needed in real time, allowing them to stay one step ahead of competitors while attracting consumers based on changing market conditions. Spectra allows retailers to elevate the impact of their ESLs, by adding color to logos and quickly directing consumers' attention to important information, such as product sales and promotions.



Spectra is made up of millions of tiny microcups, about the thickness of a human hair. Each microcup contains positively charged white particles and negatively charged black and red particles suspended in a clear fluid.