

Tech Tips

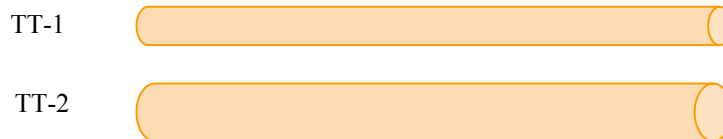


PRESS PACKING PROCEDURES

Moisture Content & Dimensional Stability

From a technical perspective, SunShine Presspacking is specially formulated (different than normal printing paper) with internal additives, fiber refinements and surface sizing to retain dimensional stability and optimal performance in offset printing environments. SunShine Presspacking is made to very tightly controlled moisture levels. The target value for SunShine Presspacking is 5% moisture and 50% Relative Humidity, this is a paper industry standard that was adopted by paper makers to support a wide geographic user base. Paper will equilibrate when its environment changes, in other words the paper moisture and the relative humidity will go up if the paper is moved to a humid environment. Because of the inherent nature of papermaking and ingredients, expansion or contraction from changing moisture conditions occurs in the cross-grain direction.

When exposed to moisture or humidity (higher than 50% rh), paper fibers may undergo a change in dimension. Two very basic illustrations below are used to visually describe the effects of moisture on a cellulose fiber. The fiber diagram in figure TT-1 is stable and has not been exposed to moisture or humidity, the fiber diagram in TT-2 illustrates what changes occur to the fiber when it is exposed to moisture.



Note the TT-2 fiber is essentially the same LENGTH, however fiber TT-2 has swelled in WIDTH, this is because cellulose fibers generally grow or shrink in WIDTH. This is also why printing papers grow during the printing process. Although the SunShine Presspacking is formulated to resist dimensional change due to environmental conditions, it is not unusual for the press packing to expand or contract 1/16" or more.

Knowing that paper fibers grow in width, we could then conclude that the paper is more susceptible to change in dimension opposite to the **grain direction** or as its called the **cross grain direction**. Since the bearer to bearer distance is fixed, we put the more stable sheet direction there, which is the grain direction. If the packing is mounted in the wrong direction, it will promote wicking and creep more easily.

SunShine Presspacking is a printer's ideal choice for flexibility and is the most economical substrate for daily use in building up cylinder diameters, controlling nip pressures, resisting compression, reducing heat buildup, absorbing and dissipating vibration and controlling print length. Paper Press Packing plays a vital role in reducing make-ready time and maintaining consistent quality of the finished project.