

# Tech Tips

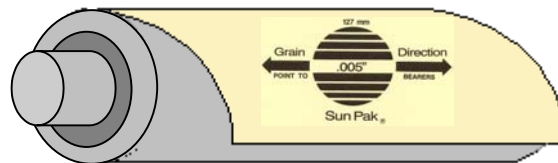


## PRESS PACKING PROCEDURES

***Grain Direction:*** “Which way should I mount the press packing on my cylinder’s, and what is grain direction?” are common questions regarding press packing.

What is ***Grain Direction?***

When press packing is manufactured, the special formulation for SunShine Presspacking includes a blend of long and short cellulose fibers. These microscopic size fibers are dispersed during the press pack papermaking process onto a moving wire mesh. The fibers tend to align in the direction of the moving wire. The illustration below shows a sheet of SunShine Presspacking, note the direction of the grain is indicated by the stenciled arrow on the sheet.



Why is ***grain direction*** an important factor in mounting the press packing?

As described above the ***grain direction*** is also the direction that fibers are generally aligned. These fibers, when exposed to moisture or humidity (higher than 50% rh), 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.

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.