



DOUBLE HELIX

GLASSWORKS

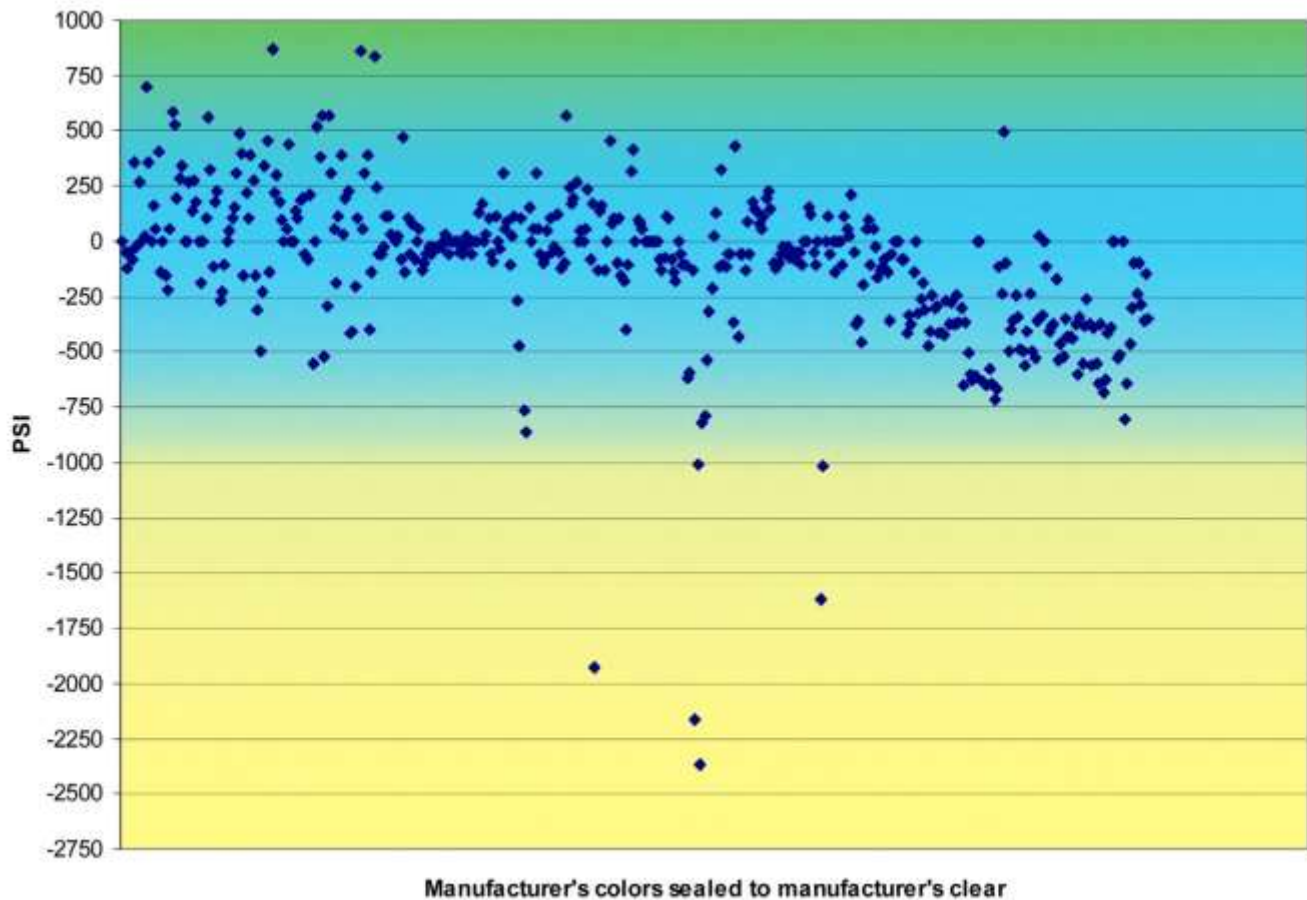
Jed Hannay

Compatibility

Our philosophy on compatibility is to measure for strain between our glass and Effetre clear and to only sell those pots that are within a narrow span of strain. We test every pot at the top, middle and bottom. We keep records of these tests for every single pot of glass we've made.

We measure the stress by taking two sample rods of our glass and a rod of Effetre clear and sealing the three together in the kiln. This is called a Trident seal. After annealing the Trident seal, we read it in a polarimeter to measure the strain between the two glasses. The strain is expressed in pounds per square inch (PSI). The manufacturers of the polarimeter equipment and other respected glass companies state that 1000 PSI is a safe limit. Above this point breakage may occur. The glass being tested can be softer or stiffer than the control glass it is being tested against. This difference can be noted with the use of positive and negative PSIs. A positive PSI indicates the glass being tested is stiffer than the control glass, and a negative PSI that the test glass is softer than the control glass. The use of positive and negative PSIs splits the safe limit of 1,000 PSI into +/- 500 PSI. It is important to note whether the glass is softer or stiffer because different adjustments must be made to correct the next batch.

To understand how broad the tolerances of the 104-soft-glasses are, we tested several other manufacturers. We took samples of their available colors and tested them against their own clears. You can see the results in the following chart. The total readable spread of strain was 3,031 PSI (867 PSI to -2,164 PSI). The actual spread is greater because the 3 broken samples can't be read. With a spread this broad it is not feasible to manufacture a glass that would be compatible with all 104- soft-glass colors. The best any manufacture can do is maintain tight tolerances and apply them to every pot of glass they produce.



- 87% of the samples were well within safe limits of +/- 500 PSI.
- 13% were outside of safe limits, of those;
 - 9% were below -500 PSI
 - 2% were above 500 PSI
 - 1% were below -1000 PSI
 - 1% broke

Additionally though some colors were compatible with the manufacturer's clear they may not be compatible with other colors from the same manufacturer. For example, if you took a glass manufactured by company X that measured -760 PSI and used it with a glass also from company X that measured 700 PSI your total theoretical PSI would be 1,460 PSI. This is beyond the recommended limit of 1,000 PSI and may break.

We only sell glasses that have tested +/- 350 PSI, well below the safe limit of +/- 500 PSI. Having a tight tolerance is the best action we can take to solve for compatibility issues.