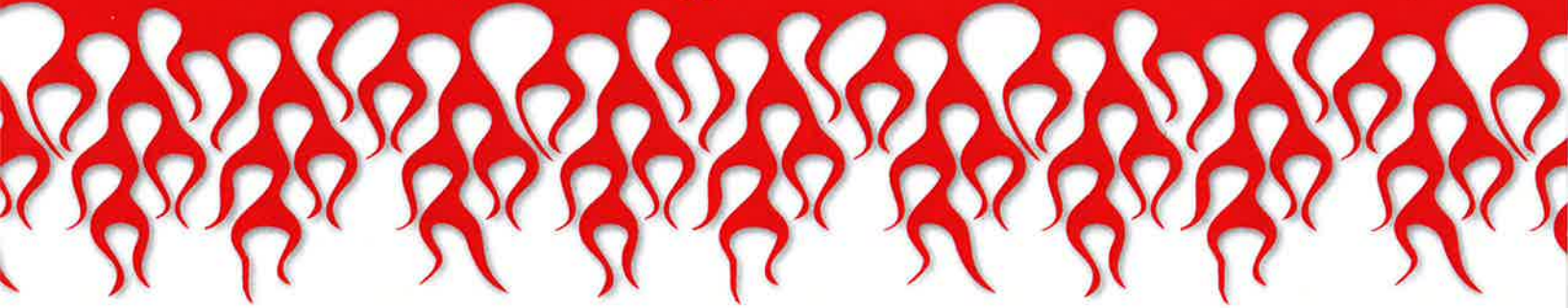


# TempTAB™

( Patent Pending )



## The Importance of Benchmarking

TempTABS are a process monitoring device designed especially for use in the powder metal, brazing and heat treating industries. TempTABS provide the ability to easily document the consistency of your furnace. They also act as an early warning device if something does change inside your furnace. TempTABS can be used in either continuous or batch processes and do not interrupt production. TempTABS measure process temperatures alongside the parts in your process.

TempTABS are made from a blend of ceramic material that exhibit predictable dimensional change (shrinkage) over a relatively wide temperature range (200-300 °C). They have undergone additional processing to remove any volatile materials, so there is no out-gassing. Each batch of TempTABS is carefully calibrated to provide reproducible information from batch to batch. Temperature data is available for hold times of 10, 30, 60, 120 and 240 minutes.

Once out of the furnace, TempTABS are measured with a digital micrometer to the nearest .01mm. The dimension is then entered into Orton's TempTAB Trakker Software where the dimension will be converted to a TempTAB temperature and displayed as both a table and a graph.

It is important to establish a benchmark of your process when the desired properties of your process are being achieved. This could be when you are getting the desired hardness, the desired sintering properties or it could be at the time you conduct a successful TUS. Once you establish a benchmark of the TempTAB dimensions in your process, it is easy to confirm your process is consistent, or changing, as often as you like. TempTABS will not tell you what is changing in your process but they will tell you if something changes. TempTABS will not provide a full thermal profile but they will tell you if it may be time to run a traveling thermocouple or data logger to obtain an updated thermal profile.

By comparing TempTAB results in various locations, you can determine the temperature uniformity inside the furnace. By using TempTABS on a regular basis as part of your QA program and utilizing the Orton TempTAB Trakker Software, you can determine the natural variation of your process and also spot any drift in temperatures that may be developing before it causes any product defects.

One of the biggest advantages of the TempTAB system is that it is a complete monitoring system. You determine the locations you want to monitor, place the TempTABS in your process, measure the TempTABS once they exit your process, send the dimension to your computer and the TempTAB temperatures are automatically graphed and listed by location.