



Advice for temperature- and chemical resistance – core materials -

You could make a distinction between two types of **core materials**:

- **Standard**
- **HT**

Regarding liquid phase, before resin is cured, max. temperature should be max. 80°C, of short duration, this means < 1 minute = max. 100°C.

For HT-material longterm temperature of max. 120°C untill curing of resin, of short duration, < 1 minute = 140°C.

In addition, higher temperature mostly lead to compressive stress. It is a question of microspheres, which are thermoplastic, gas filled ballons, which could get soft due to heat and therefore form would be changed by the outside compressive. By increasing temperature, ballon cover gets more and more softer and the gas content could expand the cover, finally could lead by overloading to overexpending, this means to destruction of the balloncover. The gas escapes and the volume, which should originally displace resin, would get lost.

After curing of the resin has began and cured resin encloses the ballons, temperature could be clearly higher without any disadvantage for the laminate. Please note that this depends on the heat resistance of used resin. Our customers for esample use epoxyd resin are working with more than 200°C temperature in the autoclave without having any problems regarding cured laminate.

In principle microspheres has a relativ chemical resistance. There are only few chemicals or dissolver, which they are not resistant to. Please note that our standard version is less resistant than our HT-version with Acrylnitril base.

From there it leads to following:

After microspheres are embedded in the cured resin, the chemical resistance is only of importance regarding open areas. As our standard materials are enclosed of glass layers, there is no need to take them into consideration.