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## Technical Bulletin

TB- H11-PSI

# Heat Up Schedules

## Schedule PS-1

This schedule is a general guide for pre cast shape bake out of high density, cement bonded grades\* of:

### Plicast Castables

Heat up rates and hold times will vary with shape configuration and size and furnace loads. For field installation bake out, please refer to **Schedules B, C, or AT-AS**.

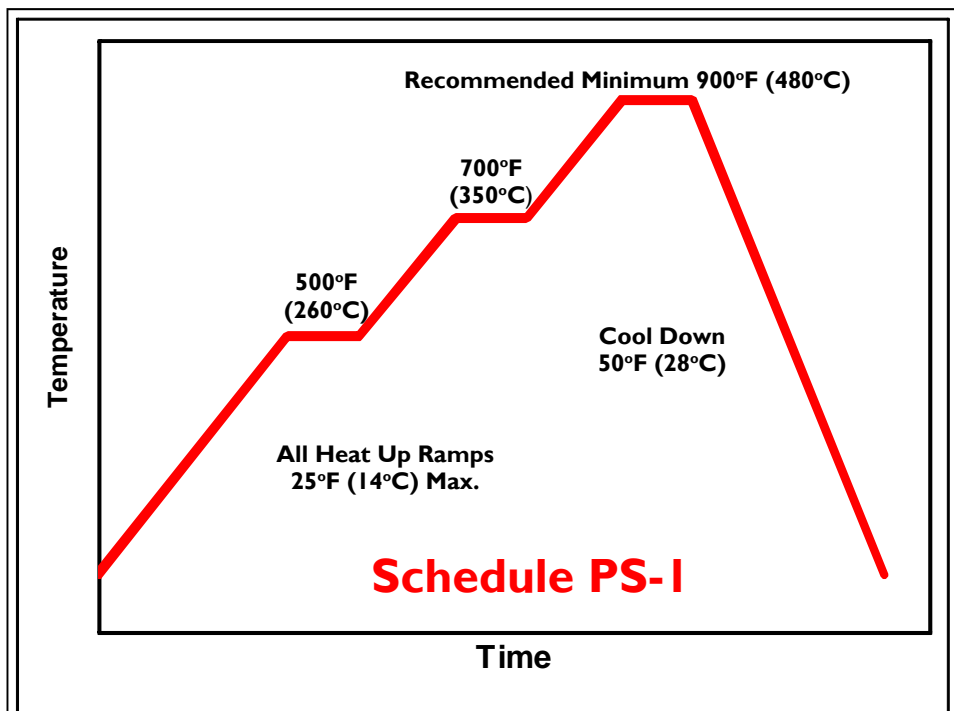
\* including Plicast HyMOR, Plicast Super HyMOR, Plicast HyREZIST, Plicast Al-Tuff and Plicast Al-Shield castables.

**Instructions:** After the castable has cured for 24 hrs., follow the heat up schedule and minimum hold times. Maximum hold temperature will vary with the intended application but should be no lower than 900°F (480°C) to assure thorough shape dewatering.

### Schedule PS-1

- All Ramps  
@ 25°F (14°C) / hr (max.)
- Hold @  
500°F (260°C)  
700°F (350°C)  
900°F (480°C) or Max.
- Hold Times (min)  
Cross Section  

Thickness	Hold
9" (225mm)	8 hr
12" (300mm)	12 hr
18" (460mm)	14 hr
- Cool Down  
@ 50°F (28°C) / hr (max.)



## CAUTION / WARNING

This schedule assumes that heating for bake out is regulated and is applied in a controlled, uniform manner. Note that the target control temperatures are to be measured by thermocouple placement on or within 1/2 in. (12 mm) of the **hot face surface** of the refractory and must be monitored at multiple locations/areas on the refractory within the furnace/vessel. Care should be taken to not exceed the heating rates or cause excessive thermal gradients (>50°F (28°C)) throughout the furnace during bake out. The refractory during bake out must not be exposed to flame impingement or spot (radiant) heating and there should be sufficient combustion air circulation within the furnace. If the bake out is interrupted due to burner/power failure, care should be taken not to shock the refractory. If/when combustion is restored, the temperature in the furnace should be stabilized at the current temperature before proceeding. Heating should proceed from the point of the schedule corresponding to the current furnace temperature, not the temperature when interruption occurred. Failure to take any of these parameters into account may result in shape damage or explosion. For questions, please consult your Plibrico representative or the Plibrico Technical or Engineering department.