

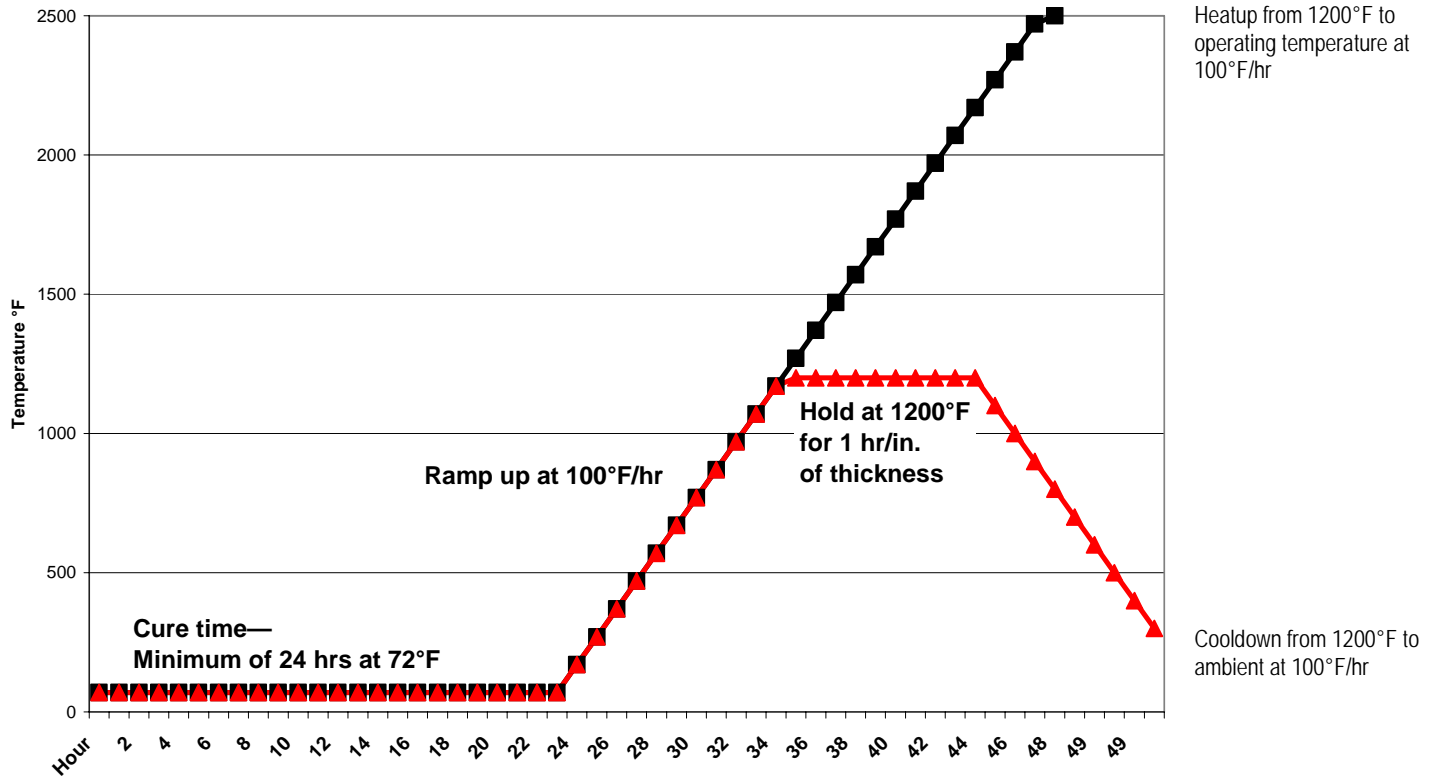
ANH Schedule 2—PLUS Rated Castables and Gunning Castables



Curing and Dryout General Guidelines

4/30/08

Example: 9-Inch Lining Schedule Total Curing and Dryout Time—49 Hours



Curing and Dryout Schedule (heated from the hot face)	Hours
Cure Time	
Minimum ambient cure time (range of 70°F to 100°F)	24
Dryout Heat Sequence	
Heat from ambient to service temperature at 100°F/hr	-25
Total Dryout Time	-25
Total Curing and Dryout Time	-49

Curing and Dryout General Guidelines

Notes

- For multi-layer lining designs, you must consider the total thickness of the various monolithics used in the lining as well as the specific dryout and heatup requirements of each product.
- Cure time is relative to ambient temperature. When installing below 60°F, you must either extend the cure time to fully hydrate the cement or add heat during the cure. Never begin dryout until a hard set is reached.
- Never let the temperature of uncured material drop below the freezing point. Ideally, the installed product should be kept above freezing until dryout is complete.
- The temperatures recommended in this schedule refer to the hot gases in contact with the refractory material and not the lining itself.
- Thermocouples must be placed about ½-in. away from the lining surface to ensure accurate temperature measurement during heatup.
- Use of weep holes is recommended when installing over metal or other non-porous surfaces.
- If dryout and cooldown are completed according to this schedule, subsequent heatup can be performed at 100°F per hr.
- For linings thicker than 12 in., contact your ANH sales and technical representative.

CAUTIONS

- If high-pressure steam or excessive steam is observed at any time during heatup, the temperature must be held or reduced until steaming subsides. The schedule can then be resumed. Increasing the temperature during steaming can result in significant steam pressure buildup and possible steam spalling.
- Proper ventilation and air circulation within the furnace is required to remove steam and exhaust gases.
- Flame impingement on the refractory must be avoided. This will cause localized overheating and possible spalling.
- Remove wood forms prior to dryout and heatup. Allowing wood forms to catch on fire can cause localized overheating and possible spalling of the refractory.
- Many factors can impact safe dryout and heatup, including temperature uniformity, air exchange, and specific vessel designs. ANH cannot warrant or guarantee the safe dryout and heatup of any specific vessel or refractory casting. However, following the general guidelines in this schedule has resulted in many successful installations. If you have specific questions or concerns, contact your ANH sales and technical representative.

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