

# I. Firing Programs

F-Fahrenheit C-Celsius

Process		Pre- Opaque±	Paste/Powder Opaque	Dentine 1*	Dentine 2*	Glaze 1	Glaze 2	1st HM Margin	2nd HM Margin	LM Margin	Correction Margin
Start	(F-C)	790-420	790-420	800-430	800-430	800-430	800-430	800-430	800-430	800-430	800-430
Dry	(minute)	03:00	06:00	05:00	03:00	01:00	01:00	03:00	03:00	03:00	01:00
Pre Heat†	(minute)	0	03:00	01:00	01:00	01:00	01:00	01:00	01:00	01:00	01:00
Heat Rate	(F-C per min)	180-100	180-100	180-100	180-100	180-100	180-100	180-100	180-100	180-100	180-100
High Temp	(F-C)	see	1716-930	1600-870	1580-860	1544-840	1526-830	1645-896	1634-890	1390-754	1544-840
Hold	(minute)	text	01:00	01:00	01:00	:45	:30	:30	:15	:15	:45
Cool Time	(minute)	0	0	0	0	0	0	0	0	0	0
Vac On	(F-C)	1112-600	1112-600	1112-600	1112-600	0	0	1112-600	1112-600	1112-600	1112-600
Vac Off	(F-C)	see	1716-930	1600-870	1580-860	0	0	1645-896	1634-890	1390-754	1418-770
Vac Hold	(minute)	text	0	0	0	0	0	0	0	0	0
Vac Level	(max.if appl.)	max.	max.	max.	max.	0	0	max.	max.	max.	max.

**Paste/Powder Opaque** will exhibit a smooth and very shiny or glossy appearance when the firing is complete.

**Dentine/Incisal** firings will also exhibit a smooth and shiny or glossy appearance when the firing is complete.

**Glazing cycles** are notably lower in temperature than the previous firing cycles. If not satisfied with the final surface, re-texturize the surface and adjust the temperatures / hold time.

**Add-On COR** powder can be mixed 1/3 to 2/3 of the **Dentine/Incisal** porcelain that is being used. The **Add-On COR** powder acts as a flux which will lower the firing temperatures but not affect the translucency of the porcelain.

**HeraCeram's Chroma** as well as the **Value** of the porcelain will not burn out on multiple firings. Temperature and time change the final glaze appearance. The CTE will never change. These features make **HeraCeram** unique and user-friendly.

**Steam Tears** can easily be avoided by adjusting the dry times.

± **Pre-Opaque** should be applied as a thin wash. Dry according to firing chart (with a 180° F/100° C heat rate). Then, follow the alloy manufacturer's end temperatures for the degas cycle. **However, utilize vacuum from 1112° F/600° C to the end temperature including the hold time. On alloys with no hold times, hold for a minimum of 2 minutes at the specified end temperature under vacuum.**

† **Pre Heat** time applicable when using a furnace with a pre heat setting. If furnace does not have a pre heat cycle, add **pre heat time to dry time** during drying. For eg. In the case of paste/powder opaque, dry time would be 6:00 minutes + 3:00 minutes = 9:00 minutes.

\* **Due to the fast rate-of-climb, HeraCeram needs a long hold time at end temperature to reach full maturity. A 1 minute hold time is standard for the dentine/incisal firing cycles. HeraCeram is fully matured when opal enamels display no milky appearance and their chroma and translucency levels match that of the Matrix Guide. // Bridges and refractory drying times should be increased to 8 minutes and the end temperature hold times should be lengthened to 1:30 minutes, while the end temperature may also need to be raised slightly to achieve the desired results of full maturity and shrinkage control.**