



Thick Firing Guidelines: 1 1/2" - 8" (38mm-203mm) work in open face molds

See 'Firing Deviation Factors' for common reasons for deviating from this table

For work 1 1/2" or more *and* over 24" (61 cm) in any direction Uroboros recommends using kilns with top, side and bottom heating.

| Firing Schedules (ramps are for 6" or larger open face firings on shelves) | | | | | | | | | | | | | | |
|--|----------------------|----------------|---|------------------------|----------------------|---------------------|----------------------|------------------|----------------------|------------------|----------------------|-----------------|----------------------------|--|
| | Heating | | | | | Annealing & Cooling | | | | | | | | |
| | Step 1 | | Step 2 | | | Step 3 | | Step 4 | | Step 5 | | Step 6 | | |
| Target temps >> | 1250° F 677° C | | To Desired Peak Temp (see Peak Temp Table) | | | 960° F 516° C | | 775° F 413° C | | 600° F 316° C | | 100° F 38° C | | |
| Maximum Thickness | Ramp Rate (per hour) | Hold (minutes) | Ramp Rate (per hour) | Hold (minutes) | Ramp Rate (per hour) | Hold (minutes) | Ramp Rate (per hour) | Hold (minutes) | Ramp Rate (per hour) | Hold (minutes) | Ramp Rate (per hour) | Hold (minutes) | Minimum Total Time (hours) | |
| 1.5" | 150° F | 150 | 150° F | Per Peak Temp Table | AFAP* | 360 | 12° F | 0 | 24° F | 0 | 75° F | 0 | 48 | |
| 38 mm | 83° C | (2.5 hrs) | 83° C | | | (6 hrs) | 6.7° C | 13° C | 42° C | (2 days) | | | | |
| 2" | 125° F | 180 | 125° F | Per Peak Temp Table | AFAP | 480 | 7° F | 0 | 14° F | 0 | 42° F | 0 | 74 | |
| 51 mm | 69° C | (3 hrs) | 69° C | | | (8 hrs) | 3.9° C | 7.8° C | 23° C | (3 days) | | | | |
| 3" | 100° F | 225 | 100° F | Per Peak Temp Table | AFAP | 720 | 3° F | 0 | 6° F | 0 | 18° F | 0 | 150 | |
| 76 mm | 56° C | (3.8 hrs) | 56° C | | | (12 hrs) | 1.7° C | 3.3° C | 10° C | (6.3 days) | | | | |
| 4" | 75° F | 270 | 75° F | Per Peak Temp Table | AFAP | 960 | 1.5° F | 300 | 3° F | 0 | 9° F | 0 | 284 | |
| 102 mm | 42° C | (4.5 hrs) | 42° C | | | (16 hrs) | 0.8° C | (5hrs) | 1.7° C | 5° C | (11.8 days) | | | |
| 5 " | 68° F | 305 | 68° F | Per Peak Temp Table | AFAP | 1200 | 1.2° F | 375 | 2.4° F | 60 | 7.2° F | 0 | 386 | |
| 127 mm | 38° C | (5.1hrs) | 38° C | | | (20 hrs) | 0.7° C | (6.3 hrs) | 1.3° C | (1 hr) | 4° C | (16.1 days) | | |
| 6" | 60° F | 340 | 60° F | Per Peak Temp Table | AFAP | 1440 | 0.8° F | 450 | 1.5° F | 150 | 4.5° F | 0 | 524 | |
| 152 mm | 33° C | (5.7 hrs) | 33° C | | | (24 hrs) | 0.4° C | (7.5 hrs) | 0.8° C | (2.5 hrs) | 2.5° C | (21.9 days) | | |
| 7" | 55° F | 375 | 55° F | Per Peak Temp Table | AFAP | 1680 | 0.6° F | 525 | 1.2° F | 225 | 3.4° F | 0 | 677 | |
| 178 mm | 31° C | (6.3 hrs) | 31° C | | | (28 hrs) | 0.3° C | (8.8 hrs) | 0.7° C | (3.8 hrs) | 1.9° C | (28.2 days) | | |
| 8" | 50° F | 405 | 50° F | Per Peak Temp Table | AFAP | 1920 | 0.4° F | 600 | 0.8° C | 300 | 2.4° F | 0 | 975 | |
| 203 mm | 28° C | (6.8 hrs) | 28° C | | | (32 hrs) | 0.2° C | (10 hrs) | 0.4° C | (5 hrs) | 1.3° C | (40.6 days) | | |

**AFAP means
As Fast as Possible

| Basic Definition of firing steps | |
|----------------------------------|---|
| Step 1 | Heat glass, small prefired components & shelf/mold materials above the softening point. Hold to distribute the heat evenly, and to allow air to escape (bubble management). |
| Step 2 | Fire to desired peak temp Hold to desired finish |
| Step 3 | Drop to upper annealing point Hold to distribute the heat evenly. |
| Step 4 | Annealing ramp: cool to below the strain point Hold |
| Step 5 | 1st Cooling ramp Hold |
| Step 6 | 2nd Cooling ramp Open kiln when kiln interior is at room temperature. |

| Peak Temperature Table - Open Face Molds | | | |
|--|-------------|-----------|-------------|
| This guide is intended as a starting point. Variations of 25° F (13.9° C) or more are expected for specific needs & circumstances, such as kiln type, rate of ramp-up, soak length, thickness of work or mold, etc. All other factors being equal. System 96 glass will require a peak temperature about 25° F (13.9° C) below Fusion FX 90 COE (Bullseye compatible) glass. | | | |
| Activity | Temp F | Temp C | Hold Time |
| 'Sugar' firing (sintering) | 1300° | 704° | 1-20 mins |
| Pâte de Verre | 1325° | 718° | 1-30 mins |
| Fuse to stick | 1350°-1375° | 732°-745° | 10-45 mins |
| Fuse flat with smooth edges | 1420°-1450° | 771°-788° | 15-90 mins |
| Fill Bas-Relief molds - wavy edges | 1450°-1475° | 788°-802° | 15-90 mins |
| Fill sharp mold details -irregular edges | 1475°-1500° | 802°-816° | 90-300 mins |