

Please see example below and advice regarding opaque colours and thickness

Please note the initial hold period - even at 1" is 4 hours before it starts to come down in temperature

| | Step One | | Step Two | | Step Three | | Step Four | | Total Time |
|---------------|------------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------------------------------|
| Target Temps | At 510oC / 495oC | | to 413oC | | to 316oC | | to Cold | | From 495oC to cold |
| Max Thickness | Ramp Rate | Hold Mins | Ramp Rate | Hold Mins | Ramp Rate | Hold Mins | Ramp Rate | Hold Mins | |
| 1/2" 12mm | Hold | 120 | 55oC | 10 | 111oC | 10 | 139oC | 0 | 7 Hours if clear - no opal colour |
| 3/4" 19mm | Hold | 180 | 28oC | 10 | 55oC | 10 | 111oC | 0 | 16 hours 4 minutes |
| 1" 25mm | Hold | 240 | 14oC | 10 | 25oC | 10 | 83oC | 0 | 22 hours 23 minutes |
| 1.5" 38mm | Hold | 360 | 6.7oC | 45 | 13oC | 10 | 42oC | 0 | 34 hours 8 minutes |
| 2" 51mm | Hold | 480 | 3.9oC | 60 | 7.8oC | 10 | 23oC | 0 | 56 hours 22 minutes |
| 3" 76mm | Hold | 720 | 1.7oC | 120 | 3.1oC | 30 | 10oC | 0 | 125 hours 37 minutes |
| 4" | Hold | 960 | 0.8oC | 300 | 1.7oC | 45 | 5oC | 0 | 244 |

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|-------------|------|------|-------|-----|--------|-----|-------|---|-------------------------------|
| 102mm | | | | | | | | | hours 31 minutes |
| 5" 127mm | Hold | 1200 | 0.7oC | 375 | 1.3oC | 60 | 4oC | 0 | 298 hours 1 minute |
| 6" 152mm | Hold | 1440 | 0.4oC | 450 | 0.76oC | 150 | 2.5oC | 0 | 443 hours 2 minutes |
| 7" 178mm | Hold | 1680 | 0.3oC | 525 | 0.58oC | 225 | 1.9oC | 0 | 647 hours 24 minutes |
| 8" 203mm | Hold | 1920 | 0.2oC | 600 | 0.42oC | 300 | 1.3oC | 0 | 931 hours 2 minutes |

This thickness is based on air getting to all sides. Don't forget if only a small opening in a piece i.e. tulip vase then have to class all of it as the full thickness of the piece. Opal glass or thick layer of opal colour flashing should be seen as twice as thick. i.e. 9mm thick but with opal colour should be treated as 3/4" 19mm on the chart.

Example 1/2" thick from 495oC: Hold for 120 minutes; then ramp down at 55oC per hour to 413oC = 90 minutes; then hold 10 minutes at 413oC; then ramp down at 111oC per hour to 316oC = 53 minutes; then hold 10 minutes; then ramp down at 139oC per hour = 136 minutes. Total Time 419 minutes = 7 hours.

Example 3/4" thick from 495oC: Hold for 180 minutes; then ramp down at 28oC per hour to 413oC = 176 minutes; then hold 10 minutes at 413oC; then ramp down at 55oC per hour to 316oC = 417 minutes; then hold 10 minutes; then ramp down at 111oC per hour = 171 minutes. Total Time 964 minutes = 16 hours 4 minutes.

Example 1" thick from 495oC: Hold for 240 minutes; then ramp down at 14oC per hour to 413oC = 351 minutes; then hold 10

minutes at 413oC; then ramp down at 25oC per hour to 316oC = 233 minutes; then hold 10 minutes; then ramp down at 83oC per hour = 499 minutes. Total Time 1343 minutes = 22 hours 23 minutes.

Example 8" thick from 495oC: Hold for 1920 minutes; then ramp down at 0.2oC per hour to 413oC = 24600 minutes; then hold for 600 minutes; then ramp down at 0.42oC per hour to 316oC = 13,857 minutes; then hold 300 minutes; then ramp down at 1.3oC per hour = 14,585 minutes. Total Time 55,862 = 931 hours - approx 39 days

Many people do their thickest pieces or their opaque pieces on a Friday so that they can anneal over the weekend.