

Basic Programmes for Firing Bullseye Glass 2018

Programming a kiln can be unnecessarily daunting. These basic schedules have been developed to make the process as simple as possible, however as each kiln fires differently please use these schedules as guidelines.

Remember our Technical Help line is available for support with all Warm Glass products on **01934 863344**.

Basic Full Fuse

For up to 50cm square with an even thickness of 6mm.

Runtime: 12hrs	Rate - Degrees/hr	Temp – Set point	Hold – Soak
Segment 1	222°C/hr (400°F)	→ 677°C (1250°F)	30 min
Segment 2	333°C/hr (600°F)	→ 804°C (1480°F)	10 min
Segment 3	999°C/hr (999°F)	→ 482°C (900°F)	60 min
Segment 4	83°C/hr (150°F)	→ 371°C (700°F)	End

Basic Slump

For non-complex slumping mould.
See our website for individual mould schedules.

Runtime: 12hrs	Rate - Degrees/hr	Temp – Set point	Hold – Soak
Segment 1	167°C/hr (300°F)	→ 640°C (1184°F)	10 min (variable)
Segment 2	999°C/hr (999°F)	→ 482°C (900°F)	60 min
Segment 3	56°C/hr (100°F)	→ 371°C (700°F)	End

Basic Tack

Providing prominent raised texture.

Runtime: 12hrs	Rate - Degrees/hr	Temp – Set point	Hold – Soak
Segment 1	222°C/hr (400°F)	→ 677°C (1250°F)	30 min
Segment 2	333°C/hr (600°F)	→ 760°C (1400°F)	10 min
Segment 3	999°C/hr (999°F)	→ 482°C (900°F)	120 min
Segment 4	83°C/hr (150°F)	→ 371°C (700°F)	End

Super Bubble Squeeze

Use this firing to avoid unwanted bubbles.

Runtime: 12hrs	Rate - Degrees/hr	Temp – Set point	Hold – Soak
Segment 1	222°C/hr (400°F)	→ 600°C (1112°F)	30 min
Segment 2	111°C/hr (200°F)	→ 677°C (1250°F)	60 min
Segment 3	333°C/hr (600°F)	→ 804°C (1480°F)	10 min
Segment 4	999°C/hr (999°F)	→ 482°C (900°F)	60 min
Segment 5	83°C/hr (150°F)	→ 371°C (700°F)	End

Ideal Process Temperature (our test results)

Skutt Firebox 8 - Ideal Full Fuse	→ 804°C (1480°F)
Skutt Hotstart Pro - Ideal Full Fuse	→ 795°C (1463°F)
Skutt Firebox 14 - Ideal Full Fuse	→ 790°C (1454°F)
Paragon SC2 - Ideal Full Fuse	→ 804°C (1480°F)
Kilncare Hobbyfuser - Ideal Full Fuse	→ 795°C (1463°F)
Kilncare Profuser - Ideal Full Fuse	→ 800°C (1472°F)
Kilncare Profuser D - Ideal Full Fuse	→ 800°C (1472°F)
Nabertherm GF240 - Ideal Full Fuse	→ 810°C (1490°F)

The average cost of a firing is between 50p - £1.50. If your kiln is not shown above, we recommend using the Warm Glass 'Kiln Test Kit' to calibrate your kiln.

What is a segment?

A segment is made up of three parts:

1. Temperature rise in degrees per hr
2. The temperature you want to reach
3. How long you want to stay there

A programme is made up of several segments in a row.

Segments can be identified in the following order.

- Heat to Bubble Squeeze
- Heat to Process Temperature
- Cool to Annealing Hold
- Cool to Room Temperature

Recommended Adjustments

A slower heat to bubble squeeze is necessary for thick projects with inclusions which may need burning out such as decals.

Adjusting the process temperature or hold time will achieve different surface and edge finishes.

Annealing times should be adjusted according to the thickness or complexity of the project. If you get cracks or bubbles, fire slower, lower, longer!

Annealing and cooling schedule for thicker projects

Thickness	12mm	25mm	50mm
Anneal soak hr/min	2hr	4hr	8hr
First cool rate °C/hr	55°C/hr	15°C/hr	3.8°C/hr
First cool range	482-427°C	482-427°C	482-427°C
Second cool °C/hr	99°C/hr	27°C/hr	6.8°C/hr
Second cool range	427-371°C	427-371°C	427-371°C
Final cool °C/hr	330°C/hr	90°C/hr	22°C/hr
Final cool range	371-21°C	371-21°C	371-21°C
Minimum cool time	5 hrs	14 hrs	47 hrs

If your finished piece will have a significant variation of thickness then please use the annealing schedule for twice the thickest section of your glass.