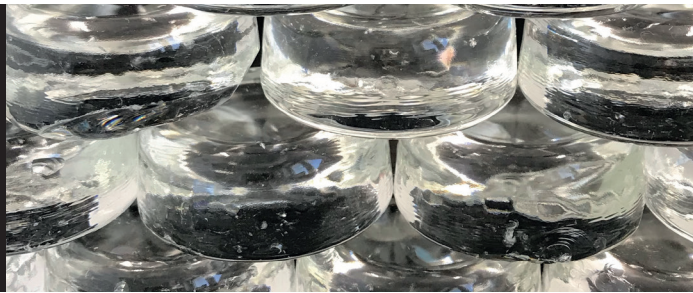


KUGLER•CLEAR



Kugler Clear is formulated for the Studio Glass Artist with superior performance and high optical clarity. On the pipe or the rod, this clear offers great workability with excellent viscosity and long work times. Crafted in Germany with generations of glass-making experience under strong environmental controls, Kugler Clear is free of both boron and lead.

CLARITY & COMPATIBILITY

- High optical quality, great clarity
- COE 96
- 100% compatible with Kugler Colors
- Compatible with other color manufacturers

PERFORMANCE

- Great workability with long working times
- Performs well with propane and oxy-pro torches

CHARGING

- Efficient melting temperature saving fuel costs and equipment wear
- Small puck shapes are easy to handle with convenient and durable packaging

PHYSICAL PROPERTIES

Working Point	1845.3 F° 1007.4 C° (LOG 4.00)
Softening Point	1281.0 F° 693.9 C° (LOG 7.65)
Annealing Point	945.5 F° 507.5 C° (LOG 13.3)
Strain Point	904.3 F° 484.6 C° (LOG 14.5)

Coefficient of Expansion ($\times 10^{-6} \text{K}^{-1}$)	9.61
Density (IGR g/cm ³)	2.5642

DISTRIBUTION

Consistent product with reliable supply, manufactured in Germany. Packaged in 25kg, stackable cardboard boxes. Ship by the box or by the pallet.

KUGLER.
COLORS + CLEAR

WORKING & CHARGING

For working, adjust the temperature depending on your desired output. Recommended work temperature between 2100-2150 F°.

For charging, melt at temperature between 2150 -2200 F°. Whether charging or working in your furnace, we recommend not exceeding 2300 F°.

When charging, melt one layer of cullet at a time. Recommend a full tank charge every 4-5 weeks.

Sample Charging Cycle

(depending on furnace)

2200 F° 1205 C°	Hold during charging Hold for additional 3-6 hours
2050 F° 1121 C°	Ramp down and hold until use Ramp to desired working temp. 1 hour prior to use

ANNEALING

Sample Annealing Cycle

(suitable for blown glass up to 25mm)

950 F° 510 C°	Hold 30 min.
889 F° 476 C°	Ramp over 90 min.
781 F° 416 C°	Ramp over 180 min.
637 F° 336 C°	Ramp over 120 min.
356 F° 180 C°	Ramp over 180 min.
	Total 600 minutes

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