Vitrigel

https://michaeldupille.com/products/
(both of his CDs on things you can do with it are inspirational)

Vitrigel may be food grade CMC (carboxymethyl cellulose i.e. from plants).
There is a bovine collagen derived membrane used in medical labs also called vitrigel.

Aloe vera gel (in the skin care section) works similarly but doesn't hold powder together quite as well.

Mixing Vitrigel,

- If you are patient and not making a quart at a time, isn't as involved as the instructions that come with it:
- Boil a cup of DISTILLED water in a small glass jar
  (be sure you have a tight fitting lid for the jar but don't put that on when you microwave the water 2 to 3 minutes)
- Gently stir in a scant tablespoon of Vitrigel. Try to avoid making lots of bubbles.
- If some of it will be sitting around for a few weeks, add 1/4 teaspoon Clorox bleach to keep down the mold.
- Cover the jar --loosely-- (or the vacuum caused by cooling will make it difficult to open) and let it sit for several hours, swirling the jar occasionally.
- Mix 1 part gel to 2 parts powder. If you want to squirt it you may need to thin the gel a bit.

Making numbers:

I use stiff black powder instead of regular black because it doesn't melt quite as quickly.

- Take the top off the squeeze bottle and squeeze it to suck the gel-powder mix into the bottle.
- Put the top back on the squeeze bottle and squeeze the goo out in number shapes onto plastic wrap.
- Leave it for a day to dry and gently ease the numbers off the plastic. Larger pieces may need longer to dry.

If you are in a hurry or doing large pieces: shape the goo on a silicone baking mat. Put the mat in a metal tray and rest the tray on spacers on top of the kiln during that day's firing (plastic wrap would melt).
Or dry it --in-- the kiln: 100/hr to 180F and hold for an hour, check it and extend the time if needed. If it's a large piece go up slower (to avoid cracks) and hold longer.
NOTE: keep in mind that things will shrink when drying and firing, about 30% total

Firing:

When it's completely dry (you don't want the steam blowing it apart) fire it.
Michael Dupille uses a staggered firing schedule-to maintain the texture of his large pieces:
(I vary this by the project, usually going up at 300 to 1180, and 50 to 100 in the 1180 to 1245 range)
• 275 to 1100 F, hold 30 min
• 150 to 1245 F, hold 10 min (this is the sintering range which helps burn off the binding agents)
• 475 to 1360 F, hold 3-5min
• Use the standard anneal for your glass and thickness

If testing shows your color going a bit gray cover light colored lines or areas with a sifting of clear powder to keep the color true. Note that you will lose a bit of your texture if you do this.

Have fun,
Karen Seymour for the PNW Glass Guild General Meeting 10/25/2026