Beads are beautiful things with a wonderful history. We have used them as money, we have used them as adornments on our bodies and we have used them to decorate our lives. However, beads are not something you should risk your health for. When setting up a lampworking studio, there are safety precautions you should give some attention.

This is a very basic article I have written simply to build awareness of the safety issues involved with lampworking. It is not everything you need to know! For the best and latest safety information, visit the ISGB and online lampworking communities such as Lampwork, Etc. You will get good solid answers to your questions.

VENTILATION

Using a combustible fuel to melt glass gives off fumes that are not healthy to breathe. If you add enamels, powdered glasses, frits and molten metals into the mix, you have a recipe for lung abuse, not to mention other physical ailments such as heavy metal poisoning from breathing in vaporized metals.

For removal of these fumes, you will need two things.

1 Fresh air coming into the room, as simple as an open window
2 A fan near your torch pulling the bad air away from you.

This is known as 'cross ventilation'. A common method of achieving this is by using a common kitchen range hood, vented to the outdoors. For general lampworking use with soft glass you should be sure to get a fan that moves at least 300cfm (cubic feet per minute) of air. A good deal can be found on these on eBay, Craigslist or the scratch and dent aisle of your home improvement store.

Use rigid, flat-sided ducting to reduce drag on the air movement. If you use the accordion type, baffled ducting, it will slow down your airflow, thus reducing the cfm of air movement of your fan. If your situation requires the use of baffled, flexible ducting…increase the cfm of your fan to compensate.

If you are going to be using enamels, powdered glasses or metals such as fine silver, gold or copper in your work, your ventilation will have to be even better. A higher cfm fan, a more concentrated area of capture (a tighter hood to concentrate the air flow more strongly where you need it), and a respirator mask are necessary.

EYE PROTECTION

Your lungs aren't the only parts of you that need to be protected. It's all fun and games until somebody loses an eye!

Not only do you need to protect yourself from the physical risks of torching, such as flying shards of glass, but also from the harmful light rays that are given off by glass as it is melted in the flame. Another benefit of proper eyewear is a reduction in the 'soda flare' that surrounds a bead as it is twirled in the flame thus improving your visibility.

I started out with rose didymium safety glasses that would do a fine job of protecting you if you are only working soft glass. There are many options of styles such as goggles, with wrap-around protection, and smaller wire frames.

If you are working borosilicate glass, you will need more lens protection, as the light given off by this type of glass is much more harmful. Boro glasses have a range of 'shades'. Be sure to pick the lenses and frames that best suit the way you work.

FIRE AND BURN HAZARDS

You will be working with flames in the 2000F range. You will be heating glass in kilns at temperatures around 1000F. A glass rod that has been in the flame, and then set on your workbench can still be hot enough to burn you a long while after you believe it is cool enough to touch.

Please store your fuel tanks outdoors. Not only is it against your local safety codes to keep anything more than 2 one pound cylinders of propane in your home, it just isn't safe. Propane is heavier than air, which means it will sink to the lowest part of the room (basement) and pool there until it is either ventilated out of the space, or ignited. (aka BOOM). Something as simple as your furnace pilot light could ignite this pooled propane and blow up not only your house, but your neighbors' as well. If you live in the middle of nowhere and want to assume the risk of self-explosion, that is up to you…but if you have neighbors, please consider them. Granted, you don't very often hear of lampworkers blowing themselves up…but is it a risk you are willing to take?

Respect your torch and know that many bad burns have been self-inflicted by taking your mind off your work for only a second. The forums are full of stories and pictures of people who simply turned to the side to reach something and passed their hand through the flame.

Equip your studio with an appropriate fire extinguisher near the exit. My studio is in an enclosed porch, but many of us have studios in our basements…be sure to have more than one exit.

A bowl of water on your workbench is not only good for cooling down your tools, but also for cooling minor burns on your fingers. Toss in hot bits of glass as you work instead of letting them go to the floor or table surface where they could smolder or injure someone.

Ventilation, eye protection and fire hazards, in my opinion, are the most important and easily ignored safety issues involved with lampworking. It is my hope that more and more people will get the information they need to make smart, safe choices and be able to continue with their glass passion for many injury-free years.