Frequently asked questions and answers:

What is the difference between a fuel bladder and a (hard rubber) plastic cell?

Fuel bladders are designed to freely deform and absorb energy under impact, like an air bag in a car. The more energy the cell absorbs, the lesser the chance of a rupture. A so-called (hard rubber) plastic cell does not have the ability to freely deform or absorb an impact. These cells do not have nylon to reinforce the plastic, which is needed to resist a puncture. Most (hard rubber) plastic cells are made from a cross-link plastic which is a very slippery material. This material allows a projectile to slip into and through the cell with very little or no resistance at all.

What is the foam inside the bladder for and how much of my total capacity does it require?

The foam is one of the most important components of a fuel cell. It is designed to reduce the slosh of the fuel and the chance of an explosion by reducing the air volume in the cell. If the cell does ignite internally, the foam absorbs the expansion and the energy of the explosion. At that point, the oxygen is used up and the flames go out. The cell must be filled with at least 80% foam to perform effectively. The foam only requires 3% of your total capacity.

What kind of additives can I run in a fuel cell?

Most fuel additives are ok to run in your fuel cell if they are not left in the cell for extended periods of time. If left in the cell for a long period of time, the additives can separate from the fuel and attack the bladder. If you are going to use additives, use them only when necessary and refill your cell with regular fuel before storing.

When should the bladder and foam be replaced?

The legal life span of a bladder set by the FIA and NASCAR is five years. Fuel bladders and (hard rubber) plastic cells age not only with time but also with the use of fuel. The more exotic the racing fuel, the faster the cell will age. The fuel degraded the (hard rubber) plastic and rubber cells by pulling out the plasticizer, which keeps the fuel cell pliable. Over a period of about three years, (hard rubber) plastic cells can become very brittle and can shatter under impact, and with no nylon to aid in holding the cell together, the fuel will dump right out. The bladder type cells start to lose their strength after about five years. Fuel cell foam should be replaced between three and five years depending on the type of fuel used.

What kind of fuel can I run in my fuel cell?

Most bladder type fuel cells are made from a certain type of fuel (i.e. gasoline or alcohol). Most plastic fuel cells can be used with both alcohol and gasoline, but if alcohol is used, the foam should be removed.

Can a sending unit be installed in a fuel cell if it has foam in it?

Yes. With many of the new electronic sending units, any fuel cell can be fitted. These new senders come in two sizes, 12” and 24”. They can be cut down to fit your cell and have no moving parts and they will not interfere with the operation.

Should my cell be static ground?

All fuel cells (and other equipment) should be static ground during refueling and during use on a track. The fuel cell moves back and forth through the foam, which can create static, build up, a static spark could occur. Additionally, the fuel going through the hose can also add to static build up. Never use a PVC tube for refueling. It will create enough static build up, causing a spark.

If I store my car for longer than three months, should I leave fuel in the cell?

If the car is not going to be used for three months or longer, the cell should be drained, dried out and stored in a dry, cool environment.

When washing my car, is it ok to get water around the fuel bladder?

Yes. But make sure that the water that gets in between the bladder and the can has a way out (like a drain hole in the bottom of the can). Never seal a bladder in a container without a breathing hole. This will cause condensation between the inside can and the bladder, which in turn rusts the can and prematurely ages the bladder?

How often should my cell be inspected for proper operation?

Your fuel cell should be serviced at least once a year. The fuel pick up screens should be replaced, the check valves should be checked out for proper operation and the fuel cell gaskets and gas cap gasket should be replaced. Most importantly, the bladder should be inspected for any fuel leaks or blistering. Any damage or broken components should be repaired or replaced before use.