

FUEL LINE MATERIALS

This is just a brief overview of some of the different types of fuel lines used in various aircraft today and a few pros and cons for each one.

ALUMINUM

Aluminum fuel lines are probably the most common and have become the industry standard on the majority of both certificated and homebuilt GA aircraft. They hold up well to various types of fuels, they are relatively light weight, and do not tend to corrode. The aluminum used to make the lines is soft so it is easily formed but it can also be dented if something hits it.

STAINLESS STEEL

Stainless steel has the advantage that it is much tougher than aluminum but it is harder to form and shape. Usually used only in exposed areas such as in the wheel wells of retractable gear aircraft where the extra corrosion and damage protection is needed. Also, in the engine compartment going to the fuel injectors on a fuel injected engine. Stainless lines can stand up to more heat than aluminum or plastic.

PLASTIC

Plastic fuel line has several advantages but some major disadvantages as well. It is the lightest of the the materials available and can usually be easily manipulated by hand without special tools. Some of the disadvantages and things to consider when working with plastic fuel lines are the compatibility of the plastic with the type of fuel used, how tight of a radius it can be bent into without causing it to kink, and protecting it from anything chaffing against it. Also, most plastic fuel lines have a service life of a specified number of years. They tend to become brittle with age and need to be replaced. This age can vary but it wouldn't be unusual to have to replace them in 10 or 12 years.

Whatever fuel line you decide to use, do your research and make sure you know as much about the material you are working with so you do not create problems for yourself down the road. A fuel system has a relatively simple job to do, but it is not necessarily as simple as it looks to get your fuel from the tank to your engine.