Methanol fuel safety

For you methanolics out there. When handling methanol, like any liquid fuel, you are likely to get it on your skin. Just wipe it off with a rag quickly before it is absorbed, and wash the skin soon after. Get a box of black (heavy-gauge) nitrile mechanics gloves (available inexpensively from Harbor Freight). Wear these if there is a risk of getting methanol on your hands. If you do get fuel on you, it's really not as bad as popular legend or the MSDS suggests. Treat it like gasoline and you'll generally be safe. If you get it on your clothes, remove the article and give it a few minutes for the alcohol to evaporate. It will evaporate completely (unlike gasoline), and the only residue will be the castor oil (or Redline Alcohol Fuel Additive) that you added to the methanol for lubrication; castor oil is not toxic. Methanol will not damage any natural fibers. I've never seen it damage any type of clothing, but I've never actually done any deliberate tests. Wear a shop coat if possible. I've had lots of methanol skin contact over my lifetime and never had a problem problem problem problem, uh what was I saying?

Ingestion - Don't ever siphon any fuel by mouth. There's pretty much no other way to accidentally ingest methanol unless you are a moron and confuse it with ethanol. Methanol is HIGHLY TOXIC (same as gasoline but the effects are more insidious, e.g., blindness comes first). If you accidentally ingest even a small amount of methanol, call a poison control center immediately, and follow their advice, which will differ depending on the time since ingestion. Here's an online MSDS for methanol:


The National Poison Control Center number is: 1-800-222-1222.

When operating an engine on methanol, make sure the area is well-ventilated, especially if the engine is running rich, such as during cold starting. You'll know immediately - that's when it may generate aldehydes, which are really irritating to the eyes, so much so that it's hard to reach the TLV (Threshold level value) for airborne toxicity.

Don't have ANY ignition source nearby when handling methanol or any fuel, e.g., a torch, cigarette, source of electrical or grinder sparks, heat-shrink gun, even a hot soldering iron. If there is a methanol fire, remember that methanol burns so cleanly that you can accidentally walk right into the flames. Watch for the heat waves in the air rather than visible flame. Methanol fires can be extinguished with water (unlike gasoline), but a dry chemical fire extinguisher works even better. CO2 fire extinguishers (preferred for gasoline or electrical fires) don't work as well because they blow stuff around as much as they remove the oxygen from the fire. Always have a dry-chem extinguisher ready to use. Have a designated safety person standing by when you are working.

One last thing - spontaneous combustion.... If you have rags soaked in methanol, do not leave them in a pile, box or trash can in the lab. Dispose of them in a sealed metal "solvent rag storage cans". If one is not available, (forgive me risk management folks), leave them overnight in an inaccessible area outdoors on the ground, far from anything that could catch fire if they should for some reason spontaneously ignite. After a night outdoors, methanol (only) rags are safe; bring them back in and reuse them! Spontaneous combustion is a concern for ANY solvent-soaked rag, the most severe concerns being with organic oils like linseed that do not evaporate very quickly - a serious concern for painters. Methanol is not high-risk, but take the precaution anyway.

In short, use common sense and be mindful that you are working with a highly flammable and toxic liquid. That's why they call it fuel.