

The ISO-Clean 2.5 isopropyl alcohol stove: Instructions for Use

The ISO-Clean 2.5 stove is designed to burn isopropyl alcohol without generating soot! We consider the ISO-Clean stove to be a “fair weather” stove as isopropyl alcohol can be difficult to light at cool temperatures (<40 F). The stove holds enough fuel to bring 2 to 3 cups of water to a boil (91%). We have used the stove up to 5000 feet with no problems, at 9000 feet, the burn rate dropped off significantly. The stove is designed to burn 91% isopropyl alcohol, 70% rubbing alcohol can be used but the power output will be lower. Higher percentages of isopropyl alcohol (such as 99% and HEET in the red bottle) can be used, but you must add water to reduce the alcohol percentage. For optimal results follow the instructions below.



1. **Always use a heat shield.** Place the base of the stove on the center of the heat shield. This protects the ground and improves efficiency.
2. **Add fuel,** the stove will hold up to an ounce of fuel. You should only need about 20 ml of 91% rubbing alcohol to boil 2 cups of water.
3. **Light the Stove.** We find it easiest to light the stove using butane lighters and igniting the stove through one of the larger inlet holes near the base. In cold weather, it may be easier to dip a small twig into the fuel, light the twig and then lower the flame into the center of the stove. We include a carbon felt disk that can be added to the stove to assist you in lighting the stove in cold weather. Using the disk will increase your fuel usage.
4. **Let the stove warm up.** Once you light the stove, you can place your pot/mug on top, however; if the stove is too “cold” you may get a little soot on the bottom of your pot. The stove will be “warm” when the flame is fully formed: this may take 5-10 seconds at room temperature. In cold conditions (<35 F) the warm up time may be 60 seconds.
5. **Use a Windscreen** as all stoves are sensitive to the wind. The wind can cause the ISO-Clean stove to burn yellow and that is when soot is generated.
6. **When your water boils, remove your pot.** The last 2 ml-3 ml of 91% isopropyl fuel in the ISO-Clean stove will generate soot as the flame front destabilizes and collapses. 70% does not create soot this way.
7. **Let the stove cool down** to room temperature prior to handling.
8. **Residual fluid.** This is a water/alcohol mixture and can be emptied onto the heat shield to evaporate. Dry the stove before storage.

Warnings and Safety

- Only use stove outside in an area clear of flammable material. Do NOT use the stove in enclosed spaces (tent or cabin).
- Use the stove under adult supervision.
- This is an isopropyl alcohol stove. Methanol/ethanol alcohol may work in the stove but this has not been validated; no other fuels can be used!

- The flame is difficult to see, use caution when removing the pot or checking the flame.
- In operation, all components of cooking system are hot and should not be touched.
- Alcohol stoves are one of the safest forms of heating food, however; all stove carry some risk. Proper operation is the key to safe operation.

The FLAT CAT Iso-Clean 2.5 Stove



QR code on how to light your Iso-Clean Stove
<http://youtu.be/yi687Kw-FOA>