WOOD FUEL GUIDE

Wood is a major source of renewable heat energy and if burned efficiently, it produces virtually no smoke. Using wood from sustainably managed trees reduces net CO_2 production compared to using fossil fuels. So heating with wood significantly reduces our reliance on fossil fuels while reducing CO_2 emissions.

Select a fuel type that matches the appliance instructions and warranty to ensure that you stay safe: then the appliance will provide a long and reliable service. Log burners can use dry hardwood or soft-wood logs - less than 25% moisture content is the usual requirement.

Where possible, use locally produced wood as it improves fuel security and encourages local community.

Logs - Factors to Consider

1. Moisture content—Dry wood (well seasoned) burns better than wet wood (green logs). Wet wood is much less efficient and if you can get them to light at all, logs that are not dry provide a fire that smoulders and creates lots of tars and smoke. These tars can be corrosive, potentially damaging the lining of the flue and increasing the danger of a chimney fire. Wet logs will tend to blacken glass in stoves even if the stove is designed to keep the glass clean. When trying to burn wet wood, the fire has to boil off the water before any heat is provided to the room. Well seasoned logs can have twice the heating value of green logs.

Only burn dry wood, either by buying it dry, or by seasoning green logs. Dry in a sunny, well aired space for one or two summers, keeping rain off in the winter. Radial cracks and bark that comes off easily suggest well-seasoned wood; better still, check with a moisture meter. First calibrate the meter and then measure a freshly split surface to get the best reading.

2. Wood density—When buying logs, the seller should advise whether they are from hardwood or softwood tree species (or mixed). The general difference is that hardwoods tend to be denser than softwoods. This means that a tonne of hardwood logs would occupy a smaller space than a tonne of softwood logs.

Denser wood tends to burn for a longer period of time meaning fewer “top ups” are required to keep a log stove burning for a given length of time. Since the heating value is approximately proportional to the weight of the wood (for the same moisture content), hardwood logs are typically priced as more expensive than softwoods when bought by volume.

3. Contamination—Ensure that your firewood is not contaminated e.g. with paint or preservatives. Treated wood should never be used in a stove because it could produce harmful gas emissions which may affect health. Burning contaminated wood is also more likely to corrode flue lining and damage the chimney as well.

Other Fuel Types

Briquettes - typically made from sawdust, a by-product from industrial manufacturing processes. The sawdust is compressed and lignin in the wood can be softened, allowing it to act as a natural binder, giving a reformed log size product. Briquettes are dense and this reduces the amount of storage space required. They are clean to handle and easy to take home in 'ready to burn' retail packs. Usually, they can be used as an alternative to firewood. The burning characteristics are different and the settings on a stove may need to be adjusted to get the best out of the fuel. Start by using less briquette fuel than you would firewood, as a briquette can produce more heat. They can usually be broken into smaller pieces to suit requirements.

Wood chip - Good quality chip should be processed to the European specification (EN 14961-4) which states guidance on both particle size and moisture content. Adherence to this will mean that the chips will help the appliance (especially domestic sized boilers) work at their optimum efficiency and reliability. Typical wood chip from a tree surgeon is too wet and variable in chip size for most appliances.

Wood pellets - are typically comprised from the same raw materials as a Briquette. Pellets are much smaller, with the European standard (EN 14961-2) providing diameter options of 6mm or 8mm. Pellets are widely used for biomass boilers, however pellet stoves are increasingly more commonplace in the market. Poor quality pellets that have too much dust are prone to crumbling, whilst over-long pellets will clog the feed mechanism.

Look for the HETAS logo when buying your wood fuel.

Finding a Wood Fuel Supplier

HETAS certify producers for their consistency of producing a good product with suitable description. See the HETAS fuel quality webpage for listings. When purchasing, check-out the following:

- Is the fuel the right type and size for your stove?
- For firewood users, are the logs green or seasoned? (is there a specified moisture content?) Consider how much space you need if drying your logs - you need space for at least one winter, preferably two).
- Some log suppliers supply by the "load" - what does this mean? Request a volume measurement in cubic metres.
- Where is the wood fuel coming from? Is the woodland sustainably managed, and reasonably nearby? (have they been imported?)
- Hardwood or Softwood logs?
- Does the supplier offer a stacking service?

Quality Assured Fuel

HETAS certify producers that meet high standards in the production of firewood, briquettes, wood chip and pellets. Find your nearest HETAS Quality Assured Fuel producer here:
Tel: 0845 634 5626
Web: www.hetas.co.uk/fuel-quality

More Information

The **Biomass Energy Centre** provides a great directory of wood fuel producers in the UK, including all HETAS certified wood fuel producers, along with other related advice.
Tel: 01420 526197
Web: www.biomassenergycentre.org.uk

For more information and access to a variety of HETAS advice sheets, visit our website at www.hetas.co.uk