

# **COCONUT SHELL CHIP**

Coconut Shell Chips are a highly consistent high energy biomass fuel that allows for easy handling and storage, as well as efficient energy conversion.

Coconut Shell Chips are used for space heating in residential appliances, industrial boilers & furnaces, district heating plants and for electricity generation in power plants. Often the chips are co-fired alongside other solid fuels such as coal.

By switching to Biomass Pellets from other fossil fuels can lead to a significant reduction in the emissions of CO2 and SO<sub>2</sub> which are widely accepted as contributing to global warming and acid rain.



## SPECIFICATIONS:

Origin: South Luzon & Visayas, Philippines

Material Composition:

- 100% Coconut shell (some fibers from the husk will be included)

#### Properties:

- Size: Passed through a 12mm screen
- Gross Calorific value: ~ 4914 kcal/kg
- Moisture Content: 8-20% (depending on collection season)
- Ash Content: < 2%
- Sulphur Content: 0.06%
- Density 575 700 kg/m³

Note: The above values are typical but are subject to variation due to the nature of the natural raw ingredients

## **ENVIROMENTAL IMPACT:**

- SO<sub>2</sub> emissions lead to acid rain and contribute to global warming. Philippines Coal typically has >1% Sulphur content, our Coconut Shell Chips contain only 0.06% Sulphur - giving an almost total elimination of SO2 emissions
- CO<sub>2</sub> is one of the main contributors to global warming. The CO<sub>2</sub> emitted by burning the pellets is the same as what was absorbed by the tree or crop during its growth, thus can be considered net neutral. We also must consider the production and supply chain emissions, these will vary from case to case, however, the impact of the supply chain with locally sourced biomass fuels is likely to be substantially lower than its fossil fuel alternative. For our Coconut Shell Chips the emissions come from the use of electricity to chip the shells, and equate to:
  - Coconut Shell Chips = 0.011 (estimated) tCO<sub>2</sub>/MT of chips

## STORAGE & SHELF LIFE:

- 1. The pellets should be stored in a dry, rain-free and well-ventilated storage
- 2. If the chips are loosely stored directly to a concrete floor, this floor should have a moisture barrier between the concrete and the soil below.
- 3. The shelf life of the chips is very long, especially when kept dry
- 4. Whilst we have demonstrated that our chips can be stored in ideal conditions for many years, we recommend that they are used within 3months of delivery to avoid any degradation



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