

**The Physics of Energy, Explained Simply
&
The Physics of Energy For Beginners**

Chemical Energy Questions

Equation: **$Q = mC$**

Q = Chemical Energy Released (J), m = Mass (kg),

C = Specific Energy (J/kg)

1. A fuel with a specific energy of 45,000 J/kg is burned and 2 kg is used. How much chemical energy is released?
2. A 1.5 kg block of wood is burned, releasing 18,000 J/kg of energy. Calculate the total energy released.
3. A 3 kg sample of coal is burned, with a specific energy of 25,000 J/kg. Find the chemical energy released.
4. 0.8 kg of a substance with a specific energy of 30,000 J/kg is used. How much energy is released?
5. A 5 kg quantity of biomass with an energy content of 20,000 J/kg is combusted. Calculate the energy output.



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6. A 4.5 kg sample of ethanol is burned, with a specific energy of 29,000 J/kg. How much energy is produced?
7. A campfire burns 2.2 kg of firewood with an energy content of 15,000 J/kg. What is the chemical energy released?
8. A 0.75 kg piece of wax is used with a specific energy of 23,000 J/kg. Find the energy released.
9. A 6 kg sample of diesel is burned, which has a specific energy of 42,000 J/kg. Calculate the energy output.
10. A 1 kg fuel tablet has a specific energy of 37,000 J/kg. How much energy does it release when burned?

