

# Why is water wet, fire hot?

What makes water wet and fire hot?

We are always aware that water creates heat that causes heat. But what makes water wet and fire hot? Probably not all of us wonder about this.

The answer to this seemingly silly question will be in the article below.

## Why is water wet?

Below is an answer to the question 'why is water wet' posted on the University of California, Santa Barbara (UCSB) website.

Water is a liquid, which can make other solid materials get wet, but it does not get wet.

Humidity is the ability of a liquid to attach to a solid surface. When the liquid sticks to the surface of the material, it is wet.



A wet or dry object depends on the balance between the adhesive force (two different things stick together) and the binding force (the two things together stick together).

The binding force is the gravitational force in a liquid, which causes molecules in the liquid to stick together. The cohesion and surface tension of the object are related. If the force is strong, the molecules in the liquid are very close together, which prevents them from spreading on the surface of an object. Sticky force is the gravitational force between material surface and liquid. If the adhesive force is strong, the liquid will spread to

the surface.

Therefore, the balance between these two forces will determine how wet the surface of the object is.

1. If the bonding force (liquid-liquid) is weaker than the adhesive force (liquid-solid): The material is wet and the fluid is spreading trying to maximize contact with the surface.
2. If the binding force (liquid-liquid) is greater than the adhesive force (liquid-solid): The material will not get wet (dry), the fluid has a tendency to form a spherical droplet, minimizing contact. .

Water actually has hydrogen bonding so it has a high binding force. Therefore, compared with some liquids such as acetone or alcohol, the ability to wet the surface of the water is worse. There are even liquids that do not wet the material, such as mercury.



When detergent is added, the binding force of the water decreases, making it better at wetting.

The above helps us explain why liquid is also, but water, cooking oil, milk . have different wetting levels.

**Why is fire hot?**



According to Thought.co, during the burning process, the chemical bonds are broken down and formed, releasing heat energy. Burning causes oxygen and fuel to turn into carbon dioxide and water. For the reaction to take place it takes energy to break the bond between oxygen atoms and in the fuel. When atoms bind together into carbon dioxide and water, more energy is released.

Nhiên liệu + Oxy + Năng lượng → Carbon Dioxide + Nước + Năng lượng nhiều hơn

Both light and heat are released as energy and exist as flames. Flames emit from ionized gases and embers emit by material hot enough to emit incandescent light.

In short, the energy stored in the fuel is suddenly released causing the fire to heat. The energy released is much more than the energy needed to initiate a chemical reaction.

1. Scientists have successfully created a "reverse solar cell" that generates electricity in the dark
2. What bad thing would happen to Earth if the sea was no longer salty?

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