

CONCEPT 2

Matter can be described by its chemical properties.



Activity

What's a Chemical Property?

Which of these situations do you think describes a chemical property and why?

- The flesh of an apple turns brown when exposed to air.
- Copper wire can be bent to form a coil.

chemical property ability of matter to react with another substance to form one or more new substances

A chemical property describes the ability of matter to react with another substance to form one or more new substances with different properties. Chemical properties can only be observed when a substance chemically interacts, or reacts, with another substance. Some examples of chemical properties are shown in Figure 2.8.

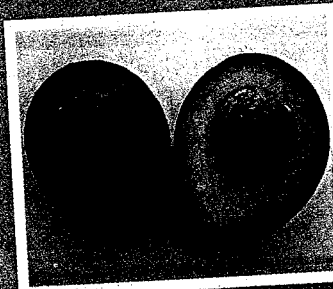
Figure 2.8 Chemical properties are only observed when substances chemically interact to form new substances—or when they fail to do so.

Combustibility describes the ability of a material to catch fire and burn in air. We can burn wood and other fuels, such as natural gas and propane, because of their combustibility.



Reactivity with acids is a chemical property. Some substances react vigorously with acids and others do not. Here, a gas forms when baking soda is mixed with vinegar, which is an acid.

Reactivity with oxygen is a chemical property. Substances in foods such as avocados, apples, and bananas react with oxygen when exposed to air. Different substances are formed that give the exposed food a brown colour.



Lack of reactivity is another chemical property. Substances that do not react with other substances are called 'inert'. Helium, used to fill balloons for parties and parades, is one example of an inert substance.

Chemical Properties

Before you leave this page . . .

1. What is the main difference between physical and chemical properties?
2. Explain why melting point is not a chemical property.