

CHEMICAL PROPERTIES

Definition: How one thing **reacts** with another

Examples:

1. **Flammability** – how well something reacts with oxygen to produce heat/flame
2. **Reactions with acid** – how well something reacts with an acid. Main reaction with an acid results in bubbling. When an acid reacts with another substance, usually hydrogen gas (which is highly explosive) is released
3. **Other Reactions** – include heat being released, bubbling, strong odor, smoke, flame, change of color, etc.
4. **Non-Reactivity** – when something *fails* to react... *example*... platinum dropped in acid has no reaction... nothing happens. Even when held into a flame, platinum has no reaction

**** Main Point to Remember about Chemical Reactions...**

- They always produce a **new substance** – totally different than the substance you started with
- Most chemical reactions **cannot be reversed**

Characteristic Property – Can be Physical or Chemical

- Something unique to a substance – doesn't matter how much or how little the sample of matter is
- Chemical characteristic property (of sodium) = *sodium ignites* when in contact with water

PHYSICAL CHANGE

- The appearance may change, but you still have the same substance as before – can be reversed and no energy is produced
- *Example* – Tear a piece of paper into 10-15 pieces. The shape and size have changed, but it's still paper