



GROUP 2 METALS + WATER

Metal	Observations	Equation
Mg	<i>No reaction (well, very slow) with cold water Burns with white flame to form white powder with steam</i>	$Mg + H_2O \rightarrow MgO + H_2$
Ca	<i>Fizzes in water and after a time a white solid forms (the solid is $Ca(OH)_2$ which is slightly soluble in water)</i>	$Ca + 2 H_2O \rightarrow Ca(OH)_2 + H_2$
Sr	<i>Fizzes in water and forms a colourless solution</i>	$Sr + 2 H_2O \rightarrow Sr(OH)_2 + H_2$
Ba	<i>Fizzes in water and forms a colourless solution</i>	$Ba + 2 H_2O \rightarrow Ba(OH)_2 + H_2$

Trend in reactivity

Becomes more reactive down the group

Explanation of trend

When the metals react they lose their two outer shell electrons.

Down the group, atoms become bigger and there is more shielding.

Therefore there is a weaker attraction between the nucleus and the outer shell electrons and so the outer shell electrons are more easily lost.

