

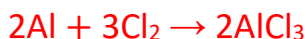
Name:

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Aluminium reacts with chlorine gas to form aluminium chloride.

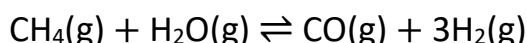
Write the balanced equation for this reaction.



What is meant by 'activation energy'?

Activation energy is the minimum amount of energy needed for a collision to be successful.

The equation for the reaction is:



Calculate the atom economy for the formation of hydrogen in the reaction.

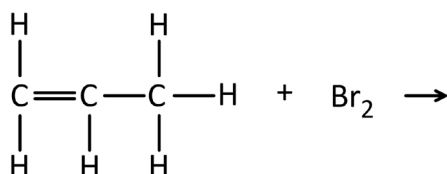
Relative atomic masses (Ar): H = 1 C = 12 O = 16

$$\text{atom economy} = \frac{3(2)}{34} = 17.7\%$$

A nickel sulfate solution is made by dissolving 23.5 g of nickel sulfate to make 250 cm³ of solution. Calculate the concentration of the solution in g dm⁻³.

$$23.5 \times 4 = 94 \text{ g dm}^{-3}$$

What is the formula of the product in this equation?



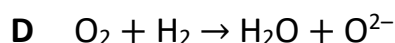
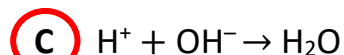
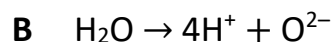
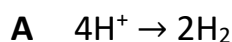
A C₂H₃Br

B C₃H₅Br₂

C C₂H₃Br

D C₃H₆Br₂

Which equation represents neutralisation?



Ethanoic acid is a weak acid.

What is a weak acid?

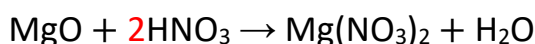
An acid that only partially dissociates or partially ionises in solution.

What is meant by the Avogadro constant?

The number of atoms in exactly 12g of carbon 12.

Accept 6.02×10^{23}

Balance the following equation.



The Haber process can have a dynamic equilibrium. What is a dynamic equilibrium?

The rate of the forward reaction is equal to the rate of the reverse reaction so there is no further change in composition of the equilibrium mixture in a closed system.