

Ammonia: Introduction

Ammonia, formula NH_3 , is a gas at room temperature. It has a pungent smell of 'wet nappies' – this is because urine can decompose to ammonia. A solution of ammonia is alkaline, and you might find one in the kitchen cupboard for use as a cleaner, because it will dissolve grease. Most of the ammonia manufactured is converted into fertilizers like ammonium nitrate, trade name NITRAM, or ammonium sulfate. These provide nitrogen to the soil.



Some background

The Haber process for manufacturing ammonia was discovered and developed by Fritz Haber and Carl Bosch in Germany in the early 20th century. This was timely, because during the first world war, the British navy blockaded the import of nitrates from Chile, which at that time were used to make ammonia for explosives. Ammonia from the Haber process was used to make nitric acid and the production of explosives went ahead. (Haber won the 1918 Nobel Prize for this process; a number of French scientists refused their awards because of Haber's war work for Germany.)

Did you know?

Ammonia can be injected directly into the soil as a fertiliser.

Making ammonia from nitrogen in the air is called 'fixing' nitrogen.

Ammonia from decomposing urine can cause nappy rash.

Ammonia compounds are used in hair dyeing and 'perming'.