

## Ammonia.

Quality assured solutions and services.



# A key component for heat treatment. Solutions and services tailored to customer needs.

#### Introduction

Ammonia ( $NH_3$ ) is vital to industry. In addition to helping to clean grime and fertilise crops, it has multiple applications; in heat treatment of metal parts, explosives, textiles, low  $NO_x$  technologies, water treatment and as an environmentally friendly refrigerant (R717). It is also a building block for the synthesis of pharmaceuticals.

At Linde Gas we can meet all your different needs around the delivery, handling and safe management of NH<sub>3</sub>. Through our local network we can help you to optimise production processes, satisfy regulatory compliance and deliver on the environmental agenda.

With our global sourcing and bulk breaking capabilities we can ensure your needs are met. Supported further by our transfilling, packaging, quality assurance and international logistics, we are able to deploy best in class operational practice and service to you.

#### Product stewardship

We operate strict policies regarding product stewardship. Our closed loop management systems ensure that all the safety, health and environmental protection issues relating to our NH<sub>3</sub> solutions and services are fully understood and reduce risk to people, property and the environment.

#### Linde portfolio

Ammonia is one product in the Linde Gas portfolio. We provide compressed, bulk, specialty and medical gases as well as packaged chemicals and refrigerants – backed by the provision of state of the art application technology, process know how, services and equipment.

As part of The Linde Group, Linde Engineering is also a leading global solutions partner for plant engineering and construction. Its expertise spans facilities for the production of hydrogen and synthesis gas, oxygen and olefins as well as natural gas treatment. Both divisions work closely together to constantly develop new products and technologies that deliver maximum value for customers.



Ammonia used in heat treatment.

# Global solutions: local service delivery. A trusted partner.

Linde Gas is one of the world's most advanced providers of added value NH<sub>3</sub> solutions and services. We offer:

#### Extensive product offer

- a choice of qualities: industrial, technical, refrigerant and high quality/ specialty grades (HiQ<sup>®</sup>)
- typical specification of ammonia 3.8 technical grade is:  $NH_3 > 99.98\%$ ,  $H_2O < 200$  ppm, oil < 10 ppm
- volumes to suit scale and application
- a choice of packaging that enables customers to reduce their inventory, better match use and handling requirements and minimise changeover; options include:



2–126 litre cylinders



drum tanks up to 1000 litres



bulk delivery

#### Total solution and services

- best in class logistics ensuring security of supply to the point of use
- technical and operational expertise
- regulatory compliance
- specialist services such as process review, on site audits, risk assessments and advice on end user production chain, dosage and timing
- turnkey supply systems
- · local service delivery through Linde

To order or for further information please visit www.linde-gas.com/chemicals

### Getting ahead through innovation.

With its innovative concepts, Linde is playing a pioneering role in the global market. As a technology leader, it is our task to constantly raise the bar. Traditionally driven by entrepreneurship, we are working steadily on new high-quality products and innovative processes.

Linde offers more. We create added value, clearly discernible competitive advantages and greater profitability.

Each concept is tailored specifically to meet our customers' requirements – offering standardised as well as customised solutions. This applies to all industries and all companies regardless of their size.

If you want to keep pace with tomorrow's competition, you need a partner by your side for whom top quality, process optimisation and enhanced productivity are part of daily business. However, we define partnership not merely as being there for you but being with you. After all, joint activities form the core of commercial success.

Linde - ideas become solutions.