

TECHNICAL BULLETIN



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AMMONIUM NITRATE AND AMMONIUM NITRATE 10%

FERTILISER FOR ALKALINE SOILS

MATERIAL & FUNCTION

Ammonium NITRATE, [NH₄NO₃], is a white crystalline solid at room temperature and standard pressure. It is commonly used in agriculture as a high-nitrogen fertilizer, and it has also been used as an oxidizing agent in explosives, including improvised explosive devices. It contains 34 % nitrogen (N), 17% N in the ammonium form and 17% as nitrate.

In solution form, it is not classified as a dangerous good unless it is hot and concentrated (>80%).

PROPERTIES

CAS number 6484-52-2 Y

UN number 0222 – with > 0.2% combustible substances

1942 – with ≤ 0.2% combustible substances

2067 – fertilizers

2426 – liquid

Molecular formula (NH₄)(NO₃)

Molar mass 80.025 g/mol

Appearance white solid

Density 1.725 g/cm³ (20 °C)

Melting point 169.6 °C

Boiling point approx. 210 °C decomp.

Solubility in water 118 g/100 ml (0 °C)

150 g/100 ml (20 °C)

297 g/100 ml (40 °C)

410 g/100 ml (60 °C)

576 g/100 ml (80 °C)

1024 g/100 ml (100 °C)

APPLICATIONS

The nitrogen in ammonium nitrate is present in two forms, half as ammonium, half as nitrate.

Nitrate nitrogen is immediately available for plant uptake, once the fertiliser dissolves in moisture (water) present in the soil.

Nitrate is mobile in the soil and moves with soil water. It is not strongly attracted to clay particles, and can be lost through leaching on well-drained light-textured sandy soils, should heavy rain fall or excess irrigation water be applied.

On heavy clay soils in inland cropping areas, nitrate is unlikely to be leached below the root zone of crops in most seasons. In high rainfall

areas, nitrate that is not utilised by plants may be washed into the soil below the root zone. Ultimately, it may reach and contaminate groundwater.

Nitrate can also be lost through denitrification (gaseous loss of nitrous oxide to the atmosphere) should the soil become waterlogged. For this reason, ammonium nitrate is not suitable for use in flood irrigated rice.

DIRECTION FOR USE

Over application can result in leaf burning. Consult your local Department of Agriculture for recommended rates

CAUTION

Avoid contact with skin and eyes and avoid breathing dust.

PACKAGING

25 kg bags (solid); 1000L IBC (10% solution)

IMPORTANT NOTICE TO CUSTOMER

*Since the use of this product is beyond the control of either seller or manufacturer, their only obligation shall be to replace any quantity of product which is proven defective. They cannot assume any risk or liability in excess of the purchase price of the product itself, which does not include labour or any consequential damages resulting from the use of this product. Determining the suitability of this product for any intended use shall be solely the responsibility of the user. **ALWAYS TEST FIRST.*** <F:\TECHBULL\BLANK.DOC>.