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### 1. Identification

Chemical name	: Nitric acid (concentration less than 70%)
Commonly used synonyms	: Aqua fortis
C.A.S. Registry number	: 7697-37-2
EINECS Number	: 231-714-2
EINECS Name	: Nitric acid.....%
Molecular formula	: $\text{HNO}_3$

### 2. Hazards to Man and the Environment

#### To man

Nitric acid is highly corrosive to all parts of the body.

Liquid splashes may produce severe skin burns and may cause serious damage to the eyes.

Nitric acid fumes are very toxic by inhalation and may cause pulmonary oedema which could prove fatal.

#### To the environment

Nitric acid is harmful to aquatic life.

### 3. Physical and Chemical Properties

Appearance	: Colourless to yellow liquid
Odour	: Acrid odour
pH (no dilution)	: < 1
Melting point	: $-17^{\circ}\text{C}$ (20%); $-22^{\circ}\text{C}$ (60%)
Boiling point	: $103.4^{\circ}\text{C}$ (20%); $120.4^{\circ}\text{C}$ (60%)
Flammability limits (in air)	: None
Auto-ignition temperature	: Not applicable
Vapour pressure	: 0.77kPa at $20^{\circ}\text{C}$ (60%)
Relative vapour density	: 2 approx (air =1)
Solubility in water	: Miscible in all proportions
Density at $20^{\circ}\text{C}$	: $1.1150\text{g}\cdot\text{cm}^{-3}$ (20%); $1.3667\text{g}\cdot\text{cm}^{-3}$ (60%)













Best Available Techniques Booklets were first issued by Fertilizers Europe in 1995. Second revised edition 2000.

1. Production of Ammonia
2. Production of Nitric Acid
3. Production of Sulphuric Acid (in collaboration with ESA)
4. Production of Phosphoric Acid
5. Production of Urea and Urea-Ammonium Nitrate
6. Production of Ammonium Nitrate and Calcium Ammonium Nitrate
7. Production of NPK Compound Fertilizers by Nitrophosphate Route
8. Production of NPK Compound Fertilizers by Mixed Acid Route



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