

# TECHNICAL BULLETIN



19 Motivation Dve Wangara, WA, 6065 AUSTRALIA  
T +61 8 9302 4000 | FREE 1800 999 196 | F +61 8 9302 5000

## NITRIC ACID

**CONCENTRATED SOLUTIONS - 45, 58, 60, 62, 68%**

### NITRIC ACID 62%

Contains 854g/L NITRIC ACID

#### DANGER

**Causes severe skin burns and eye damage.**

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Keep/Store away from clothing and combustible materials. Do not breathe dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection.

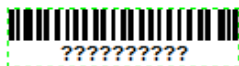


UN 2031 NITRIC ACID  
CLASS 8 HAZCHEM 2R PG II

**EMERGENCY INFORMATION:** Fire: Use water spray to keep fire-exposed containers cool. Spills: Neutralize with soda ash. Place in a chemical waste container. Additional information is listed in the Material Safety Data Sheet.

**IN AN EMERGENCY DIAL 000 POLICE OR FIRE BRIGADE**

**CONTENTS ???? L  
BATCH NO. ????????**



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**MATERIAL & FUNCTION**

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**NITRIC ACID** ( $\text{HNO}_3$ ) is a colourless to slightly yellowish liquid.

**NITRIC ACID** is miscible with all portions of water. **NITRIC ACID** is a strong oxidizing agent: It dissolves all substances with an oxidization potential more negative than +0.96 Volts with release of reddish-brown, toxic nitrogen ( $\text{NO}_2$ ), e.g. copper, mercury, silver. **NITRIC ACID** 99% reacts violently with oxidizable organic substances so much so that these substances can ignite and start a fire.

**NITRIC ACID** is used in the following products/ Industries: Dyes & Dye intermediates, H Acid, Drugs & Drug intermediates, Oxalic Acid, Pigments, Glyoxal, Pesticides, Nitrates, Fertilizers, Pickling, Explosives, Steel re-rolling, and Gold/Silver Refining.

## TYPICAL PROPERTIES

Concentration of <b>NITRIC ACID</b> :	45%	65%	69%	99.0%
Melting point	-19	- 33°C	- 40°C	- 42°C
Boiling point (approx.)	113°C	122°C	122°C	84°C
Vapour pressure (20°C) mm Hg	9.55	6.58	7.1	42
SG (20°C)	1.2783	1.3913	1.409	1.506

**NITROUS ACID** (as  $\text{HNO}_2$ ); Percentage by mass (maximum) 0.1

Chlorides (as Cl); Percentage by mass (maximum) 0.002

Sulphates (as  $\text{H}_2\text{SO}_4$ ); Percentage by mass (maximum) 0.005

Residue on ignition; Percentage by mass (maximum) 0.05

Chemical name : **NITRIC ACID**

Chemical formula  $\text{HNO}_3$

Molar weight 63.02

CAS No. 7697-37-2

EINECS No. 231-714-2

INDEX No. 007-004-00-1

## Specifications

Total Acidity (as  $\text{HNO}_3$ ); Percentage by mass 62.00 (61.0 – 63.0)

## Containers for Packaging and Storage

**NITRIC ACID** 62 % should be stored in AISI 316 or 304L Stainless Steel

The product can be stored in HDPE carboys of International Standard for short periods of time (3 -12 months)

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## APPLICATIONS

**Chemical, chemical products and pharmaceutical industries:** For producing pure nitrates for analytical purposes.

**Electrical and electronic industries:** For etching and pickling in particular cases, e.g. in the production of semiconductor components and chips. Electronics industry.

**Photochemistry:** In the production of phosphors.

## DIRECTION FOR USE

**Dairy and related Industries: NITRIC ACID** may be used in the **ACID** cleaning cycle of dairy equipment to be cleaned by CIP. **NITRIC ACID** will ensure the quick and efficient removal and non-redeposition of organic and inorganic soils. The acid has the ability to passivate (render non-reactive) stainless steel equipment promoting longer use life. **NITRIC ACID** can be used at concentrations of 0.15% to 0.8% acidity (1.1 to 5.9 mls/L) at a temperature of 60°C. After use, the equipment should be thoroughly rinsed with potable water.

**CAUTION:** Causes severe burns. Forms a mist due to atmospheric humidity. Refer to the safety data sheet should be considered. Maintain good industrial hygiene while handling

*Avoid contact with skin and eyes and avoid breathing vapour or spray mist.*

## PACKAGING

15 Litre, 200 Litre and 1000 Litre containers

## 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.*