



## Material Safety Data Sheet

### Nitric Acid ( 60% )

Version 1.00

Revision Date 16.05.2007

#### 1. Identification of the substance/preparation and of the company/undertaking

<b>Trade name</b>	<b>Nitric Acid ( 60% )</b>
<b>Synonyms</b>	<b>Nitric Acid ( 60% )</b>
<b>Use</b>	raw material for fertilizers
<b>Company</b>	Sasol Nitro Secunda Fertilizer Division P.O Box 1562 Secunda, 2302 Republic of South Africa

**Information (Product safety)** Telephone: +27 17 639 3000 Fax: +27 11 522 5860

<b>Emergency telephone number</b>	Europe, Israel, Africa, Americas	+44 (0)208 762 8322
	Middle East, Arabic African countries	+961 3 487 287
	Asia Pacific	+65 633 44 177
	China	+86 10 5100 3039
	South Africa	+27 (0)17 610 4444

#### 2. Composition/information on ingredients

##### Nitric acid

**Contents:** 56.00 %W/W

**CAS-No.** 7697-37-2

**Symbol(s)** O, C

**Index-No.** 007-004-00-1

**R-phrase(s)** -R 8 -R35

**EC-No.** 231-714-2

For the full text of the R phrases mentioned in this Section, see Section 16.

#### 3. Hazards identification

##### Identification of the risks

R35	Causes severe burns.
R 8	Contact with combustible material may cause fire.

#### 4. First aid measures

<b>Inhalation</b>	Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, seek medical advice
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	<i>immediately. Keep patient warm and at rest.</i>
<b>Skin contact</b>	<i>Wash off immediately with plenty of water for at least 15 minutes. Wash contaminated clothing before re-use. Call a physician immediately.</i>
<b>Eye contact</b>	<i>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Seek medical advice.</i>
<b>Ingestion</b>	<i>Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.</i>

#### Notes to physician

**Risks** *First aider needs to protect himself.*

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	<i>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide., Keep containers and surroundings cool with water spray.</i>
<b>Specific hazards during fire fighting</b>	<i>Use water spray to cool unopened containers. The product itself does not burn.</i>
<b>Special protective equipment for fire-fighters</b>	<i>Wear self-contained breathing apparatus and protective suit.</i>
<b>Further information</b>	<i>Cool containers / tanks with water spray.</i>

## 6. Accidental release measures

<b>Personal precautions</b>	<i>Use personal protective equipment. Do not breathe vapours or spray mist. Keep people away from and upwind of spill/leak.</i>
<b>Environmental precautions</b>	<i>Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.</i>
<b>Methods for cleaning up</b>	<i>Soak up with inert absorbent material and dispose of as hazardous waste.</i>
<b>Additional advice</b>	<i>Never return spills in original containers for re-use.</i>

## 7. Handling and storage

#### Handling

**Safe handling advice** *Avoid inhalation of vapour or mist. Avoid contact with skin and eyes. Wear personal protective equipment. Always replace cap after use.*



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#### Storage

**Requirements for storage areas and containers** Keep containers tightly closed in a cool, well-ventilated place.

## 8. Exposure controls / personal protection

#### Components with workplace control parameters

##### NATIONAL OCCUPATIONAL EXPOSURE LIMITS

##### EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

Components	Type	Control parameters	Update	Basis
NITRIC ACID	STEL STEL	2.6 mg/m <sup>3</sup> 1 ppm	02 2006 02 2006	EU Exposure Limit Values EU Exposure Limit Values

#### Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

#### Personal protective equipment

**Respiratory protection** In case of insufficient ventilation wear suitable respiratory equipment.

**Hand protection** Gloves suitable for permanent contact:  
Material: natural rubber/natural latex, butyl-rubber,  
Polyvinylchloride, polychloroprene  
Break through time: 2 hrs  
Material thickness: 0.5 mm  
unsuitable gloves  
Material: natural rubber/natural latex, nitrile rubber/nitrile latex

**Eye protection** face shield

**Skin and body protection** protective suit, Safety shoes

**Hygiene measures** Wash hands before breaks and immediately after handling the product.

**Protective measures** Wear suitable protective equipment.

## 9. Physical and chemical properties

**Form** liquid

**state of matter** liquid; at 20 °C; 1,013 hPa



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<b>Colour</b>	clear, colourless
<b>Odour</b>	sweet pungent
<b>pH</b>	< 1; acidic
<b>Melting point/range</b>	-41.6 °C
<b>Boiling point/range</b>	121 °C
<b>Vapour pressure</b>	11 - 15 hPa; 20 °C
<b>Density</b>	1.345 g/cm <sup>3</sup> ; 20 °C
<b>Water solubility</b>	completely soluble, completely miscible
<b>Viscosity, dynamic</b>	1.5 mPa.s
<b>Relative vapour density</b>	(Air = 1.0)
<b>Additional advice</b>	Thermal decomposition

#### 10. Stability and reactivity

<b>Materials to avoid</b>	Oxidizing agents, Reducing agents, Acids, Combustible material
<b>Thermal decomposition</b>	Decomposes on heating.

#### 11. Toxicological information

<b>Acute inhalation toxicity</b>	Nitric Acid: LC50 rat: 0.13 mg/l; ; 4 h
<b>Skin irritation</b>	Nitric Acid: human: Extremely corrosive and destructive to tissue.; ; Causes burns.Exposure quickly causes a strong corrosive action upon all body tissue., Hazardous by absorption through the skin.
<b>Eye irritation</b>	Nitric Acid: human: ; Risk of serious damage to eyes.
<b>Further information</b>	Nitric Acid: May be harmful by inhalation, ingestion, skin adsorption.  Ingestion may cause nausea, vomiting, sore throat, stomach-ache and eventually lead to a perforation of the intestine.  Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough.  Hazardous by absorption through the skin.
<b>Human experience</b>	Nitric Acid: Bloody vomiting



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#### 12. Ecological information

##### Ecotoxicity effects

##### Toxicity to fish

Nitric Acid:  
Toxic effects on fish and plankton

##### General advice

Nitric Acid:  
Neutralisation will reduce ecotoxic effects.

#### 13. Disposal considerations

##### Product

Dispose of in accordance with local regulations.

#### 14. Transport information

##### ADR

UN-No.: 2031; Class: 8; Packaging group: II; CO1; Description of the goods: NITRIC ACID

##### RID

UN-No.: 2031; Class: 8; Packaging group: II; CO1; Description of the goods: NITRIC ACID

##### ADNR

UN-No.: 2031; Class: 8, (5.1); Packaging group: II; C8; Description of the goods: NITRIC ACID

##### IMDG

UN-No.: 2031; Class: 8; EmS: F-A, S-B; Packaging group: II; Description of the goods: NITRIC ACID

##### ICAO/IATA

UN-No. : 2031; Class: 8; Packaging group: II; Description of the goods: Nitric acid

#### 15. Regulatory information

##### Labelling



##### Regulatory base

67/548/EEC

##### Symbol(s)

C: Corrosive  
O: Oxidising



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**R-phrase(s)**

R35: Causes severe burns.  
R 8: Contact with combustible material may cause fire.

**S-phrase(s)**

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S60: This material and its container must be disposed of as hazardous waste.  
S23: Do not breathe gas/fumes/vapour/spray.

**Hazardous components which must be listed on the label**

Nitric acid

## 16. Other information

*Full text of R-phrases referred to under sections 2 and 3*

R 8 Contact with combustible material may cause fire.  
R35 Causes severe burns.

All reasonable efforts were exercised to compile this MSDS in accordance with ISO 11014 and ANSIZ400.1.1993. The MSDS provides information regarding the health, safety and environmental hazards, at the date of issue, to facilitate the safe receipt, use and handling of the product in the workplace. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which the product may be handled, used and received in the workplace, it remains the obligation of each user, receiver or handler to, prior to usage, review this MSDS in the context within which the product will be received, handled or used in the workplace. The user, handler or receiver must ensure that the necessary mitigating measures are in place as regards health and safety. This does not substitute the need or requirement for any relevant risk assessments to be conducted. It further remains the responsibility of the receiver, handler or user to communicate such information to all relevant parties that may be involved in the receipt, use or handling of the product.

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