

Safety data sheet
according to 1907/2006/EC, Article 31



**Protea
Chemicals**

A member of the Omnia Group
"more than just a chemical supplier"

Printing date 16.09.2015

Version number 6

Revision: 16.09.2015

1 Identification of the substance/mixture and of the company/undertaking

· **Product identifier**

· **Trade name:** AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

· **Article number:** PB0027

· **CAS Number:** 1336-21-6

· **EC number:**

215-647-6

· **Index number:**

007-001-01-2

· **Relevant identified uses of the substance or mixture and uses advised against Industrial Use**

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Protea Chemicals Wadeville

1 Berrange Road

Wadeville, Germiston

Tel: 011-821 3300

Protea Chemicals PE

127 Grahamstown Road

Deal Party, Port Elizabeth

Tel: 041-403 1000

Protea Chemicals CT

54 Killarney Avenue

Killarney Gardens, Milnerton, Cape Town

Tel: 021-550 8100

Protea Chemicals KZN

150 Quality Street,

Jacobs, Durban

Tel: 031-468 5424

Head Office

13 Sloane Street

Epsom Downs Office Park

Bryanston

Tel: 011-7098743

Protea Chemicals KZN

150 Quality Street, Jacobs

Durban

Tel: 031-4685424

Protea Chemicals Cape Town

54 Killarney Avenue

Killarney Gardens,

Milnerton, Cape Town

Tel: 021-5508100

Protea Chemicals Inland

1 Berrange Rd

Wadeville, Germiston

Tel: 011-8213300

· **Further information obtainable from:** Protea Chemicals

(Contd. on page 2)

PRC

Safety data sheet
according to 1907/2006/EC, Article 31



Protea
Chemicals

A member of the Omnia Group
"more than just a chemical supplier"

Printing date 16.09.2015

Version number 6

Revision: 16.09.2015

Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

(Contd. of page 1)

- **Emergency telephone number:**
08610 OMNIA or
08610 66642

2 Hazards identification

- **Classification of the substance or mixture**



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

- **Label elements**

- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS05 GHS09

- **Signal word** Danger

- **Hazard statements**

Causes severe skin burns and eye damage.

Very toxic to aquatic life.

- **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Substances**

- **CAS No. Description**

AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

- **Identification number(s)**

- **EC number:** 215-647-6

- **Index number:** 007-001-01-2

PRC

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31



Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Remove to fresh air. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing. Flush affected areas with plenty of water and soap.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Most important symptoms and effects, both acute and delayed** Breathing difficulty
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** Can form explosive gas-air mixtures.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water. Should not be released into the environment.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Transfer into suitable containers. To be disposed of in compliance with existing regulations. After cleaning, flush away traces with water.
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31



Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Put on appropriate personal protective equipment. Keep away from open flames, shut of the production of sources of ignition. Eelectricity: static electricity, electricity sparks, heat. Do not breathe vapor or mist. No smoking.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
*Provide ventilation for receptacles.
Avoid sources of ignition.*
- **Information about storage in one common storage facility:**
*Store away from flammable substances.
Store away from foodstuffs.*
- **Further information about storage conditions:** *Keep container tightly sealed in a dry well-ventilated place.*
- **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
Ensure eyewash stations and safety showers are close to the workstation location.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** *Not required.*
- **Additional information:** *The lists valid during the making were used as basis.*
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
*Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes and skin.*
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**
Due to missing tests no recommendation to the glove material can be given for the product/the preparation/ the chemical mixture.



Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31



Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

(Contd. of page 4)

· **Eye protection:**
Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	Clear, colourless
· Odour:	Ammonia-like
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/Melting range:	-57,5 °C
· Boiling point/Boiling range:	36 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.
In use, may form flammable/explosive vapour-air mixture.

· **Explosion limits:**

· Lower:	15,4 Vol %
· Upper:	33,6 Vol %

· **Vapour pressure at 20 °C:** 443 hPa

· **Density at 20 °C:** 0,88-0,89 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

· **Other information**

No further relevant information available.



Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

(Contd. of page 5)

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Possibility of hazardous reactions**
Hazardous reactions possible when in contact with incompatible materials
When heated ammonia will be liberated and this may form flammable mixtures with air
- **Conditions to avoid** Avoid incompatibles, high temperatures and heat.
- **Incompatible materials:** Acids, metals, oxidizers, hypochlorites and halogens
- **Hazardous decomposition products:**
Nitrogen oxides
Ammonia

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
- | | | |
|--|------|-----------------|
| · LD/LC50 values relevant for classification: | | |
| Oral | LD50 | 350 mg/kg (rat) |
- **Primary irritant effect:**
 - **on the skin:** Caustic effect on skin and mucous membranes.
 - **on the eye:** Strong caustic effect.
 - **on the respiratory system:** Inhalation of Ammonia vapours will have a caustic effect on the respiratory system
 - **Sensitisation:** No sensitising effects known.
 - **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Toxicity**
- | | |
|----------------------------|----------------|
| · Aquatic toxicity: | |
| LC50 24 hours | 0,5 ppm (Fish) |
- **Persistence and degradability** No further relevant information available.
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
 - **Ecotoxicological effects:**
 - **Remark:** Very toxic for fish
 - **Additional ecological information:**
 - **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

(Contd. on page 7)

PRC

Safety data sheet
according to 1907/2006/EC, Article 31



Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL




· **Other adverse effects** No further relevant information available.

(Contd. of page 6)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number · ADR, IMDG, IATA	UN2672
· UN proper shipping name · ADR · IMDG, IATA	2672 AMMONIA SOLUTION, ENVIRONMENTALLY HAZARDOUS AMMONIA SOLUTION
· Transport hazard class(es) · ADR	
 	
· Class · Label	8 Corrosive substances. 8
· IMDG, IATA	
	
· Class · Label · Subsidiary risk	8 Corrosive substances. 8 -
· Packing group · ADR, IMDG, IATA	III
· Environmental hazards: · Marine pollutant: · Special marking (ADR):	Environmentally hazardous substance, liquid No Symbol (fish and tree)
· Special precautions for user · EMS Number: · Segregation groups · ERG No.	Warning: Corrosive substances. F-A,S-B Alkalis 154
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31



Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

(Contd. of page 7)

· Transport/Additional information:

· ADR

- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

- **Transport category**

3

- **Tunnel restriction code**

E

· IMDG

- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":**

UN2672, AMMONIA SOLUTION, ENVIRONMENTALLY HAZARDOUS, 8, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· GHS label elements

The substance is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS05 GHS09

- **Signal word** *Danger*

· Hazard statements

Causes severe skin burns and eye damage.

Very toxic to aquatic life.

- **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31



Protea
Chemicals

A member of the Omnia Group
"more than just a chemical supplier"

Printing date 16.09.2015

Version number 6

Revision: 16.09.2015

Trade name: AMMONIUM HYDROXIDE (AMMONIA SOLUTION) 25 % INDUSTRIAL

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

(Contd. of page 8)

PRC